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October 1, 2002

The Honorable Bob Holden
Governor, State of Missouri
Executive Office, State Capitol
Jefferson City, MO 65101

Dear Governor Holden:

The Department of Mental Health wishes to submit this annual update of our strategic plan. Current fiscal realities have greatly challenged us and made more essential the importance of effective planning. The continued advancement of critical support and services to thousands of Missourians with mental illness, substance abuse/ addiction and developmental disabilities is dependent on our success.

The plan continues to present the balancing of two roles in responding to the mental health needs of Missouri citizens; that of a public mental health authority and that of a provider or broker of services and supports for targeted populations. There are four important outcomes identified for department focus. Two outcomes reflect our broad public mental health charge by identifying needed prevention efforts in the areas of substance abuse and suicide, with particular emphasis on the youth of Missouri. The other two outcomes address operational improvements specific to serving and to seeking an improved quality life for persons with severe mental illness, addiction problems, and/or developmental disabilities.

The State's financial status has heavily influenced our planning efforts. This plan continues to reflect efforts to do more with less. Many of our identified strategies seek to maximize interdepartmental cooperation and joint ventures as a means to stretch limited resources as well as to accomplish other meaningful objectives.

The Mental Health Commission, the Department, and the entire mental health community remain committed to improving the lives of Missourians affected by mental illness, substance abuse and developmental disabilities.

Sincerely,

Dorn Schuffman
Director

DS:rsc

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DEPARTMENT OF MENTAL HEALTH STRATEGIC PLAN, October 2002 -- QUICK REFERENCE

OUTCOMES	OBJECTIVES	STRATEGY SUMMARY
1 Reduced Deaths & Injuries Associated with Substance Abuse Among Young Missourians	1A Decrease Binge Drinking Among College Students 1B Increase Delay of Onset of Use of Alcohol & Other Drugs by Missouri Youth by One Year of Age by FY 2004 in Pilot Sites 1C Increase the Number of Alcohol and Drug Abusing Pregnant Women Admitted to CSTAR Programs by 5% by 2006	• Implement University of MO Campus Prevention Services established through Interagency Contract • Disseminate findings from Core Institute Survey to promote institutional action and change • Implement with DESE School-Based Prevention & Intervention Initiative – Pilot 5 Sites in MO • Develop outreach plans and activities targeted at pregnant women and the professionals who serve them
2 Reduced Rate of Suicides In Missouri	2A Reduce Rate of Suicides Among Young Missourians by 6% of Nationwide Rate by 2006 2B Reduce Rate of Suicides Among Elderly Males in Missouri by 9% of Nationwide Rate by 2006	• Continue implementation of MO Suicide Prevention Plan jointly with DHSS • Train professional caregivers who serve high risk populations • Coordinate Suicide Prevention strategies with Substance Abuse Prevention strategies in Outcome 1

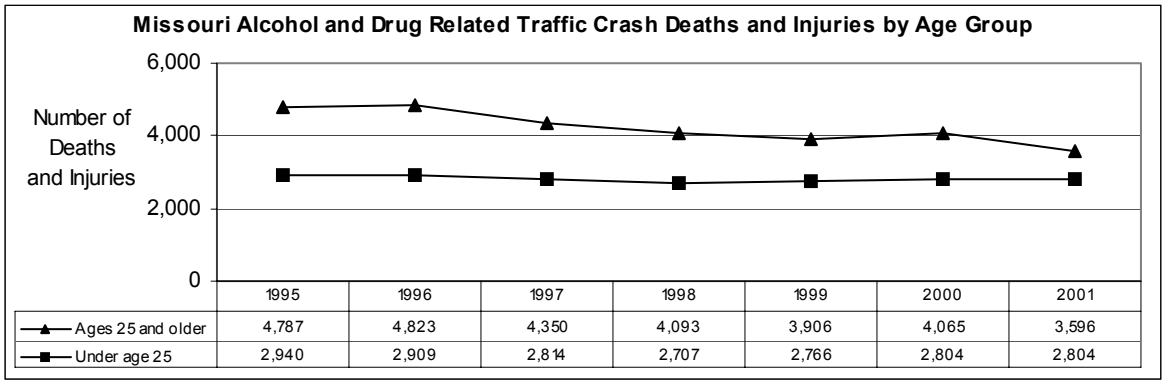
3 Children with Severe or Multiple Mental Health Problems Will Achieve Success Living in Their Communities	3A Increase Percentage of Days in School for Children & Youth Served in the Eastern Region System of Care by 25% in FY 2003
	3B Increase Percentage of Days which Children in State Custody & Served by the Eastern Region System of Care Live in Their Own Homes or Homelike Environment by 30% in FY 2003
	3C Increase Access to System of Care Teams for Children & Youth Served by Multiple State Departments by Establishing 5 Additional Teams in Other Areas of the State by FY 2003
		• Implement & solidify System of Care Team in Eastern Region
		• Provide training and technical assistance to Local and State System of Care Teams
		• Continue to improve statewide monitoring and outcome evaluation/measurement efforts
		• Expand capacities
		  ○ Treatment Homes
		  ○ Adolescent Independent Living
		  ○ Respite & Family Supports
		• Duplicate System of Care Model across State

4 Improved Quality of Life for Department of Mental Health Consumers Living in the Community	4A Reduce Staff Turnover in Community Residential Facilities by 15% by 2006 4B Increase Employment among Missourians with Disabilities Served by the Department of Mental Health 4C Increase the Percentage of Missourians with Serious Mental Illness Who Show Movement Towards Recovery by 5% by 2006	• Seek new funding for direct care worker salary and benefits enhancement • Disseminate information & technical assistance from DMH Work Place Improvement Team findings • Finalize DMH Employment Plan • Increase focus on consumer employment goals • Complete/disseminate “Best Practice Guidelines” related to recovery concepts • Seek new funding for expansion of Comprehensive Psychosocial Rehabilitation programs

KEY OUTCOME 1: Reduced Deaths & Injuries Associated With Substance Abuse Among Young Missourians

FIGURE 1.1

Trend in Missouri Alcohol & Drug Related Traffic Crash Deaths and Injuries
By Age Group, 1995-2001



	1995	1996	1997	1998	1999	2000	2001
Ages 25 and older	4,787	4,823	4,350	4,093	3,906	4,065	3,596
Under age 25	2,940	2,909	2,814	2,707	2,766	2,804	2,804

Sources: Missouri Department of Mental Health, Division of Alcohol and Drug Abuse. Status Report on Missouri's Alcohol & Drug Abuse Problems, 8th Edition, January 2002. Missouri State Highway Patrol, Information Systems Division, 2002.

I Why This Measure is Important

The use of alcohol and other drugs exacts a terrible toll on the lives of young Missourians, including the unborn. The abuse of alcohol, tobacco, prescription medications, and illegal drugs is the nation's (and Missouri's) number one health problem. In calendar year 2001, 2,804 of Missouri's young people under age 25 were killed or injured in alcohol or drug related traffic crashes, the same number that were killed or injured in 2000 (Figure 1.1). At least 15,000 women were smoking, drinking alcohol, or using illicit drugs during pregnancy for children born in Missouri in the year 2000.

Research is beginning to help us understand who is most at risk, why they are at risk, and who would benefit most from prevention and intervention. For instance, young people who begin drinking alcohol are at increased risk for all types of life problems. They are at increased risk for injury from alcohol-related traffic crashes and injury due to assault and violence. These young people also have an increased lifetime risk for alcohol dependence and drug addiction accompanied by all the resulting problems. Women who drink during pregnancy are at risk for delivering babies with fetal alcohol effects or fetal alcohol syndrome.

From a public health perspective, reduction of deaths and injuries associated with substance abuse and an increase in drug free births are reasonable and necessary goals. However, with many factors contributing to annual fluctuations in death or injury rates as well as the number of drug free births, it is also a broad and ambitious goal. With that in mind, the Department of Mental Health (DMH), Division of Alcohol and Drug Abuse (ADA) will monitor and report on these fluctuations but focus its attention on three issues upon which State interventions are expected to have a meaningful and measurable effect: 1) binge drinking among college students, and 2) age of first use of alcohol or other drugs by Missouri's youth, and 3) the number of pregnant women admitted to specialized CSTAR substance abuse programs for women and children.

II Trend Analysis

As Figure 1 illustrates, alcohol and drug-related traffic deaths and injuries in Missouri have decreased between 1995 and 2001. This decrease has averaged 4.50% per year for ages 25 and older. However, among adolescents and young adults under age 25, the average annual decrease has been only 1.53%. During this same period, the number of pregnant women admitted to treatment increased by only 17.

III Factors Influencing the Measure

There are many factors influencing deaths and injuries related to use of alcohol and other drugs. Factors that diminish the risk are enhanced vehicle safety, seatbelt usage, road improvements, greater public awareness of the dangers of heavy drinking and drug use, tougher laws, an effective Substance Abuse Traffic Offender Program (SATOP) and advances in medical care. Factors that increase the risk include the earlier onset of alcohol and drug use, increased rates of binge drinking among young people, trends in drug use (e.g., toward more dangerous drugs or those that are associated with higher crime rates), weaker family and neighborhood ties, decreasing influence of social institutions (e.g., churches), and widespread availability not only of drugs themselves but also the knowledge of how to produce them—often disseminated via the Internet.

IV What Works

Nationwide, there has been a decline in alcohol and drug related traffic deaths. This drop in fatalities is generally attributed to stronger laws (particularly the new .08 laws), tougher enforcement and adjudication, and more effective public education. Americans understand the impaired driving problem, societal norms have changed, fewer people are driving after drinking, and more are getting caught when they do. Equally important, Americans support the enforcement of these laws and swift and fair sentencing of offenders. The Substance Abuse Traffic Offender Program (SATOP) is a Department of Mental Health program that provides assessment, education, intervention and referral to over 32,000 offenders per year.

Unfortunately, the number of pregnant women seeking and admitted for treatment and delivering drug free babies has remained stagnant.

What works to reduce deaths and injuries associated with alcohol and drug use and to increase the number of pregnant women getting substance abuse treatment? The answers are as complex as the problem. Persons under the influence are injured at school or work. They die alone at home from accidental overdose. They are injured or killed in the process of buying or selling drugs. They are hospitalized after suffering trauma to vital organs from heavy alcohol or drug use. The sweeping cultural changes and radical legal and economic reforms that would be necessary in order to reduce deaths and injuries at the macro level are far beyond the scope of any one department of state government They are, in fact, beyond the powers of state government itself in a country with constitutional guarantees for certain freedoms.

With these limitations in mind, the focus of DMH will be on young people killed or injured due to alcohol or drug use and on the number of pregnant women getting treatment. Three factors that clearly contribute to deaths and injuries associated with alcohol and other drug use are 1) college binge drinking, 2) age of first use of alcohol and other drugs, and 3) the fear by many pregnant women of negative social and legal consequences if they seek treatment. It is well known that too many college students die from accidents or medical complications caused by acute alcohol intoxication. Too many children and adolescents use alcohol and other drugs while their brains and other organs are still developing, causing significant and even permanent impairment in mental and emotional functioning, later life chemical dependency or mental illness, and premature death. Too many substance abusing pregnant women do not get the treatment they need, increasing the risk for fetal alcohol effects, fetal alcohol syndrome, and other drug effects. A single child with Fetal Alcohol Syndrome can cost the State well over a million dollars in medical and educational expenses over a lifetime.

V Concerns

In a culture that prizes escapism as much as it demands immediate relief from suffering, alcohol and other drugs have a steady hold. Normal adolescent development brings a desire to be rebellious. This rebelliousness often takes the form of alcohol or other drug use. Cultural, social, and developmental pressures to use and abuse chemicals are tremendous. Given the complexities involved in addressing these issues, targeting key contributing factors for change may be the best that can be done.

DATA TABLES

TABLE 1.1

Rate of Missouri Resident Deaths with Medical Etiology* of Alcohol or Other Drug Use, 1991-2000

ICD & Age Category**	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Death Rate Under Age 18 Based On ICD-9***	0.38	0.52	0.59	0.22	0.22	0.43	0.14	0.07		
Death Rate Under Age 18 Based On ICD-10****									0.50	0.21
Death Rate Ages 18-24 Based On ICD-9	2.94	3.36	2.18	1.79	2.80	3.43	3.01	3.73		
Death Rate Ages 18-24 Based On ICD-10									4.80	5.78

**Etiology, the cause or origin of a disease or disorder as determined by medical diagnosis*
***Rates are number of deaths per 100,000 population in age group*
***ICD-9, International Classification of Diseases, 9th revision*
****ICD-10, International Classification of Diseases, 10th revision*

Source: Missouri Department of Health and Senior Services, 2002.

TABLE 1.2

Rate of Missouri Resident Traffic Crash Deaths and Injuries Attributed to Alcohol or Other Drug Use, 1995-2001

Age Category*	1995	1996	1997	1998	1999	2000	2001
Crash Death & Injury Rate Under Age 18	66.9	70.6	65.8	57.9	62.0	60.7	54.7
Crash Death & Injury Rate Ages 18-24	403.5	388.0	379.0	372.0	364.7	361.4	377.4
Crash Death & Injury Rate Ages 25 and Older	139.1	138.7	124.2	116.1	110.1	111.9	99.0

** Rates are number of deaths per 100,000 population in age group*

Source: Missouri Department of Public Safety, Missouri State Highway Patrol, (Statistical Analysis Center).

TABLE 1.3

Rate of Missouri Resident Visits to Hospitals and Emergency Rooms with Medical Etiology of Alcohol or Other Drug Abuse, 1994-2000

Hospital & ER Visits	1994	1995	1996	1997	1998	1999	2000
Alcohol & Drug Related Hospital & Emergency Room Rate Per 100,000 Population	1,245.5	1,020.5	1,076.5	1,103.6	1,156.5	1,181.7	1,286.7

Source: Missouri Department of Health and Senior Services, 2002.

VI Description of Measure

Deaths: Missouri resident deaths under age 18 and ages 18-24 per 100,000 population in those age groups with a medical etiology of alcohol or other drug use as defined by a set ICD-10 codes designated by the National Center for Health Statistics. Data is collected by the Missouri Department of Health and Senior Services, Center for Health Information Management and Evaluation.

Hospital and Emergency Room Visits: Missouri resident visits per 100,000 population, to hospitals and emergency rooms with a medical etiology of alcohol or other drug use as defined by a set of ICD-9-CM codes based on the Healthy People 2000 tracking system. Data is collected by the Missouri Department of Health and Senior Services, Center for Health Information Management and Evaluation.

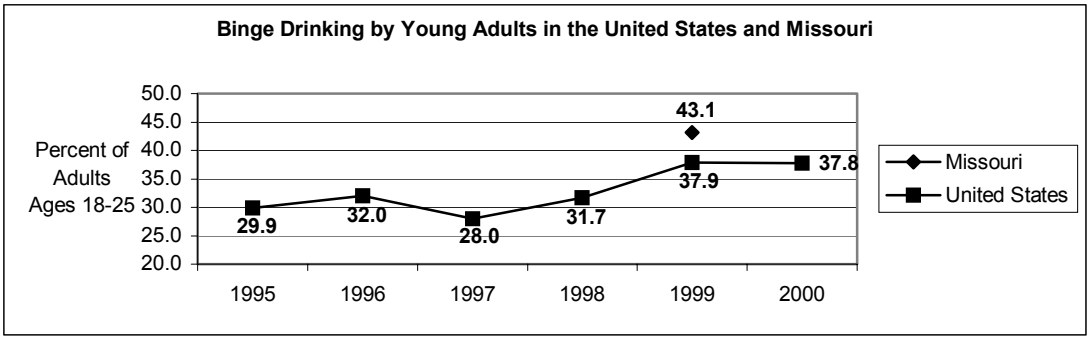
The Department recognizes that these measures do not reflect the mortality and morbidity of infants born to mothers using tobacco, alcohol and/or illicit substances. Composite numbers are not be available for an overall score. (See Objective 3C for relevant data.)

Again, although statewide deaths and injuries will be monitored and reported, the many variables contributing to their rise or fall on a year-to-year basis are impossible to control by any single government agency or by government built on a foundation of individual freedom and personal responsibility.

KEY OBJECTIVE 1A: Decrease Binge Drinking Among College Students

FIGURE 1.2

Trend in Binge Drinking* Among US Population Ages 18-25, 1995-2000, and Missouri Comparison for 1999



Source: National Household Survey on Drug Abuse.

*Binge Drinking is defined in the National Household Survey as consuming five or more drinks on one occasion at least once in the past 30 days. Note: In 2001, the Substance Abuse and Mental Health Services Administration, Office of Applied Studies revised the U.S. and Missouri data for 1999.

I Why This Measure is Important

Colleges and universities should be safe places where students thrive academically and grow personally and socially. One of the biggest obstacles to college students' success is the abuse of alcohol and other drugs. Substance abuse is one of the nation's leading problems and college campuses are not in any way buffered. In fact, many young adults see their drinking and use of other drugs increase during college years.

Binge alcohol use is a major problem on college and university campuses. It is variously defined in the research literature, but for our purposes will match the Core Institute definition as "consuming five or more drinks in one sitting within a two-week period." Students who binge drink are more likely to damage property, have trouble with authorities, miss class, have hangovers, and experience injuries and even death (Wechsler, 1994.) About one-third of college students report drinking for the sole purpose of getting drunk. It is estimated that 40% of academic problems, 29% of dropouts, 80% of vandalism, 90% of Greek hazing deaths, and 90% of date rapes are alcohol or other drug related.

II Trend Analysis

Information measuring binge drinking at all Missouri Public College/Universities was compiled for the first time during the 2000-2001 academic year through the Missouri Partners in Prevention coalition. Seven of the twelve institutions involved in the coalition participated in the Core Alcohol and Drug Survey from Southern Illinois University. A year-end summary of the data was compiled in December of 2001. Over the past ten years, single entities like the University of Missouri have collected data measuring binge drinking. This data suggest that binge drinking by Missouri college students is holding steady at around 50%. Data from the statewide Core survey suggested a binge drinking rate of 47.6% among Missouri's college students.

III How Missouri Compares to Others

Among 18-25 year-olds, 43.1% of Missouri residents reported binge drinking compared to 37.9% nationally.

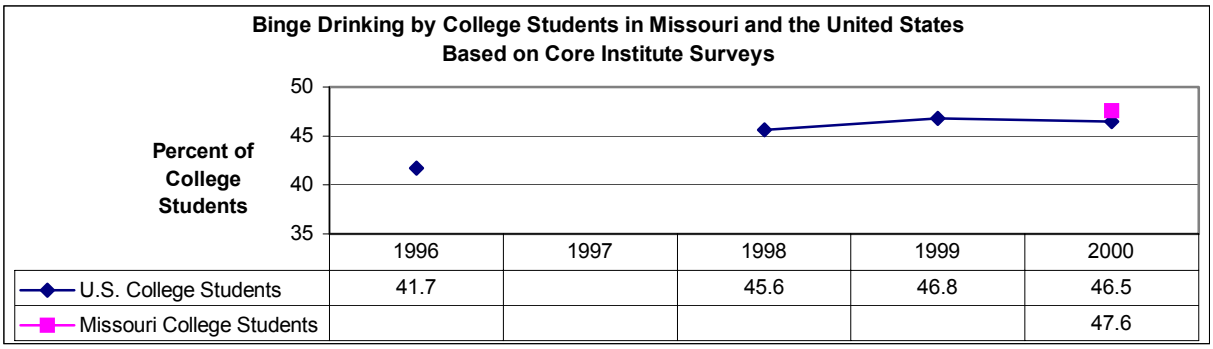
National averages from the Harvard School of Public Health College Alcohol Study indicates binge drinking among college students has remained fairly consistent over the past decade

- 44% in 1993;
- 42.7% in 1997;
- 44% in 1999 and;
- 44% in 2002

National averages from the Core Institute (www.siu.edu/~coreinst) illustrate that binge drinking among college students has increased since 1995. Information from statewide CORE survey administration indicates that the binge drinking rate among Missouri's college students in the year 2000 is slightly higher than the national average (see Figure 1.3).

FIGURE 1.3

Trend in Binge Drinking* Among US College Students,
1996-2000, & Missouri Comparison for 2000



	1996	1997	1998	1999	2000
U.S. College Students	41.7		45.6	46.8	46.5
Missouri College Students					47.6

Source: CORE Alcohol and Drug Survey.

* Binge Drinking is defined in the CORE Survey as consuming five or more drinks on one occasion at least once in the past 2 weeks.

The Core Survey described later will provide more consistent and reliable data about binge drinking on Missouri campuses.

IV Factors Influencing the Measure

Bars surround campuses and actively market to college students. Drink specials and private parties make drinking inexpensive. Since the regions with heaviest drinking are colder climates, there is speculation that colder climates lead to more drinking due to fewer outdoor recreational opportunities. Several large breweries have headquarters in the Midwest region of the country, including Busch, Miller and Coors. Finally, college campuses are reflective of the overall culture.

V What Works

Social norming and social marketing in combination with environmental management appear to be the most promising ways to reduce binge drinking.

- *Social norms* are people's beliefs about the attitudes and behaviors that are normal, acceptable, or even expected in a particular social context. In many situations, people's perception of these norms will greatly influence their behavior. Therefore, when people misperceive the norms of their group—that is, when they inaccurately think an attitude or behavior is more (or less) common than is actually the case—they may choose to engage in behaviors that are in sync with those false norms. For example, studies have shown that college students overestimate how much their peers drink. Social norming means getting information to college students about actual normative rates of consumption of alcoholic beverages.

- *Social marketing* is the planning and implementation of programs designed to bring about social change using concepts from commercial marketing.
- *Environmental management* refers to an approach grounded in the principle that student decisions about substance use are shaped by the physical, social, economic, and legal environment in which that behavior occurs; that environment can be shaped by committed prevention advocates, higher education, government officials, and others. Environmental management articulates the need to broaden prevention approaches beyond traditional educational programs to include a range of strategies for changing the campus and community environment.

VI Concerns

Again, in a culture with an ambivalent stance toward alcohol and other drugs - promoting individualism and personal responsibility on one hand, demanding immediate gratification and instant relief from suffering on the other - reducing substance use and abuse in any given setting is a significant challenge. A combination of factors must come together at once in order to achieve measurable results.

VII Description of Measure

The University of Missouri-Columbia is under contract with ADA to develop a coalition called Partners in Prevention, which includes 12 state-funded college and university campuses in Missouri. This coalition targets 39.8% of all Missouri college students. All 12 campuses participate in the Core Institute of Southern Illinois University survey on at least an annual basis. The survey provides data related to binge drinking, including:

- The percent of college students participating in the survey who report consuming five or more drinks in one sitting within two weeks prior to the survey; and

- Reported average number of drinks consumed per week by college students participating in the Core Institute survey.

The instrument used was titled the “Core Alcohol and Drug Survey” because it was designed as the centerpiece or "core" of potentially lengthier studies that institutions might conduct. It was specifically designed to be inexpensive, easily administered, of high quality, statistically reliable and valid, and comparable to other surveys in the field. The content of the Core Survey was developed on the basis of both theoretical assumptions regarding alcohol and drug use in the higher education setting and on previous research reported in the literature.

The first statewide Core Alcohol and Drug Survey, of Missouri public college students has been completed. The analysis of this data will provide the baseline for

college binge drinking rates. Targets for future years will be determined. All twelve institutions in Partners in Prevention will participate in the Core Alcohol and Drug Survey each year.

VIII Key Strategies

A. Implement intergovernmental contract with the University of Missouri Curators for a comprehensive program of science-based prevention services to reduce binge drinking among Missouri's college students.

1. Information Dissemination: This strategy provides awareness and knowledge of the nature and extent of substance use, abuse, and addiction and their effects on individuals, families, and communities. It also provides knowledge and awareness of available prevention programs and services. Information dissemination is characterized by one-way communication from the source to the audience, with limited contact between the two. Examples include:

   - Prevention resource center/library with educational posters, brochures, videos, books, etc;
   - Social marketing materials targeted for a statewide social norming effort, in addition to materials specific to individual campuses;
   - Quarterly newsletter to Partners in Prevention coalition members;
   - Partners in Prevention website;
   - Freshman orientation;
   - Information tables held regularly in student union;
   - Health fairs; and
   - Safe Spring Break survival kits, aimed at helping college students make smart decisions for themselves during spring break.

2. Education: This strategy involves two-way communication and is distinguished from the information dissemination strategy by the fact that interaction between the educator/ facilitator and the participants is the basis of its activities. Activities under this strategy aim to affect critical life and social skills, including decision-making, refusal skills, critical analysis (e.g., of media messages), and systematic judgment abilities. Specific strategies include:

   - Ongoing training opportunities for higher education professionals and students on effectively preventing alcohol and other drug abuse among Missouri college students:
     - Monthly meetings/trainings for Partners in Prevention coalition members;

- Annual statewide prevention conference;
- Annual drive-in workshops in the fall;
- Peer educators presenting prevention education programs to Greek houses, residence halls, and high schools; and
- *Don't Cancel That Class Initiative* – Prevention staff "fill-in" with an alcohol-related program when professors can't make it to their class.

3. Alternatives: This strategy provides for the participation of target populations in activities that exclude substance use. The assumption is that constructive and healthy activities offset the attraction to - or otherwise meet the needs usually filled by - alcohol and drugs and would therefore minimize resort to the latter. Providing money to student groups for the purpose of holding alcohol/drug free events on campus would be one example of this strategy.
4. Problem Identification and Referral: This strategy is intended to identify students engaged in illegal/age-inappropriate use of alcohol or tobacco and first time users of illicit drugs in order to assess and refer for education if needed. It should be noted, however, that this strategy does not include the following:

   - Administrative sanctions to address alcohol violations on campus, including education, intervention, and referral, and treatment; and
   - Notification letters sent to parents when students engage in alcohol related behavior.

5. Community-Based Process: This strategy aims to enhance the ability of the community to more effectively provide prevention and treatment services for substance abuse disorders. Activities in this strategy include organizing, planning, enhancing efficiency and effectiveness of services implementation, interagency collaboration, coalition building, and networking. An example of this process would be Community Action Teams addressing issues of access to alcohol, insuring intervention and referral services are available and working to change the campus culture.
6. Environmental: This strategy establishes or changes written and unwritten community standards, codes, and attitudes, thereby influencing incidence and prevalence of substance abuse in the general population. This strategy is divided into two subcategories to permit distinction between activities that center on legal and regulatory initiatives and those that relate to the service and action-oriented initiatives:

   - Community Action Teams addressing the issues of access to alcohol, drink specials:

- Social Marketing Campaigns - Planning and implementation of programs designed to bring about social change using concepts from commercial marketing.

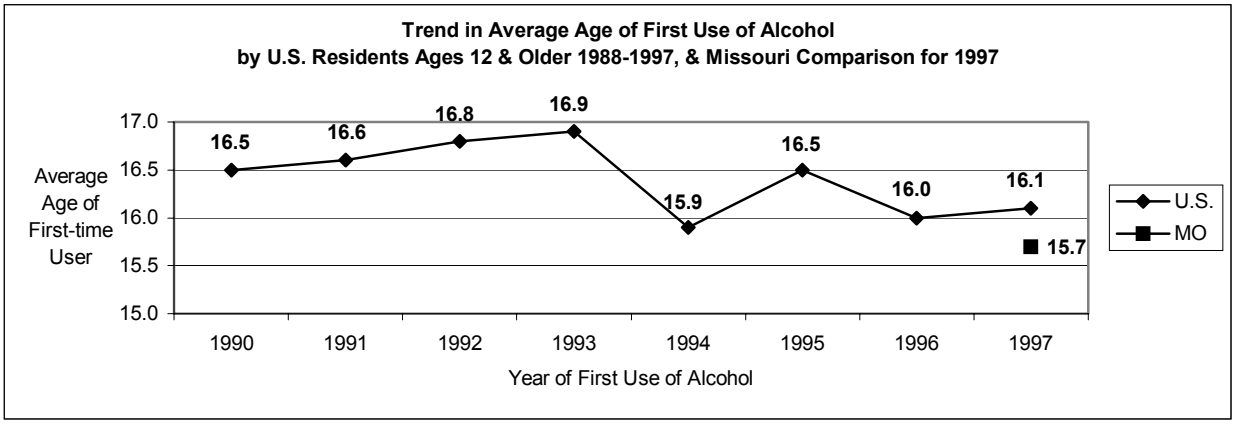
B. Disseminate findings from Core Institute Survey to foster institutional action where necessary and promote social norming.

[redacted]

KEY OBJECTIVE 1B: Increase Delay of Onset of Use of Alcohol & Other Drugs by Missouri Youth by One Year of Age by FY 2004 In Pilot Sites

FIGURE 1.4

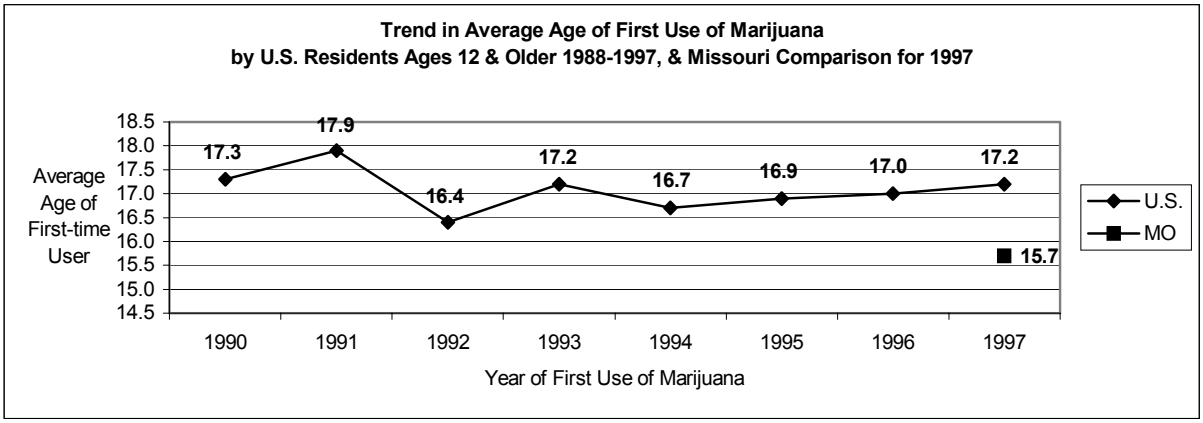
Trend in Average Age of First Use* of ***Alcohol*** by US Residents Ages 12 & Older 1988-1997 & Missouri Comparison for 1997



Source: National Household Survey on Drug Abuse.

FIGURE 1.5

Trend in Average Age of First Use* of ***Marijuana*** by US Residents Ages 12 & Older 1988-1997 & Missouri Comparison for 1997



Source: National Household Survey on Drug Abuse.

I Why This Measure is Important

Use of alcohol and other drugs by youth can cause significant impairment to the developing brain and is directly correlated with later life chemical dependency, with well-established links to social and legal problems, mental illness, and premature death.

The human brain is not fully developed until age 23. Children and young adults are exquisitely sensitive to the effects of alcohol and other drugs. Abuse of alcohol and other drugs at an early age can alter both the function and structure of the human brain. Children who begin using substances on a regular basis fail to learn pro-social behaviors and coping skills that will carry them into successful adulthood. They do poorly at home, poorly at school, and poorly in interpersonal relationships. They are at significant risk for injury and death from accidents, overdose, and medical complications.

II Trend Analysis

Data has been and will continue to be collected on Missouri students in grades 6, 8, 10, and 12 who have ever used alcohol or other drugs. The data shows that, in calendar year 2000, the average age of first use of alcohol in those grades was 12.77 years. Average age for first use of cigarettes was 12.18 years and average age for first use of marijuana was 13.63 years. Although data for the 2002 Student Survey is not yet available, preliminary data reveals average age for first use consistent with the 2000 data. (Table 1.4).

TABLE 1.4

Age of First Use* of Substances by Missouri Youth in Grades 6, 8, 10, & 12

Average Age of First Use in Missouri	**Alcohol**	**Cigarettes**	**Marijuana**
2000	12.77	12.18	13.63

Source: Missouri 2000 Student Survey.

** Age of first use as measured by the National Household Survey (Fig. 1.4 & 1.5) differs from data in the Missouri 2000 Student Survey (Table 4) because of differences in groups surveyed and types of questions asked. The student survey is more accurate for youth in grades 6, 8, 10, and 12. Both surveys show that Missouri youth begin using alcohol and other drugs at an earlier age.*

III How Missouri Compares to Others

According to the National Household Survey, among adolescents and adults ages 12 and older who have ever used alcohol or marijuana, the average age of first use is lower (younger) in Missouri than the national average (Figures 1.4, 1.5 and Table

1.4). The mean age of first use of alcohol is 16.1 years nationally compared to 15.7 in Missouri. Therefore, people in Missouri start drinking alcohol about four months earlier than the national average. The mean age of first use of marijuana is 17.2 nationally compared to 15.7 in Missouri, indicating that people in Missouri start using marijuana about 18 months earlier than the national average. Many of the dangers associated with early use of alcohol and other drugs are disproportionately worse the earlier the use starts. Missourians start using alcohol and other drugs earlier than the national average and therefore are at greater risk for problems.

IV Factors Influencing the Measure

- ***Parental involvement/family effects***
- Cultural and spiritual factors
- Neighborhood effects
- Institutional influences
- Availability of alcohol and other drugs
- Risk and protective factors

V What Works

The "National Survey of American Attitudes on Substance Abuse VI: Teens," presented in February 2001, contained the findings of the sixth annual CASA National Survey of American Attitudes on Substance Abuse. The survey of 1,000 teens (age 12-17) reveals that parents who are "hands-on" (who have established a household culture of rules and expectations for their teen's behavior and monitor what their teens do, what television shows they watch, what they access on the Internet, what music they purchase, and where they go on evenings and weekends) raise children who are less at risk of smoking, drinking, and using drugs. Contrary to conventional wisdom, teens in "hands-on" households are more likely to have an excellent relationship with their parents than teens with "hands-off" parents. The survey concluded that parents should be parents to their teenagers, not pals.

Risk and Protective Factors research provides the basis for state and national prevention plans:

- Several types of treatment approaches specifically designed for adolescents have demonstrated success and promise as best practice models. The Adolescent Treatment Models (ATM) project is currently conducting a 3-year research project to examine 11 specific types of adolescent treatment programs to determine cost-effectiveness and outcomes.

- Prevention and Treatment Programs that involve the family show positive results.

VI Concerns

Once again, in a culture with an ambivalent stance toward alcohol and other drugs (promoting individualism and personal responsibility on one hand, demanding immediate gratification and instant relief from suffering on the other) reducing substance use and abuse in any given population or target group is a significant challenge. A combination of factors must come together at once in order to achieve measurable results, and many of those factors are beyond the reach of any single government agency or even state government itself.

DATA TABLE

TABLE 1.5

Age of First Alcohol/Drug Use Among Persons Admitted for Treatment in Missouri Substance Abuse Programs

Drug of Choice	Admissions for Treatment		Started Using Under Age of 13		Percentage Under 13	
	FY 2000	FY 2001	FY 2000	FY 2001	FY 2000	FY 2001
Alcohol	16,115	16,570	3,300	3,223	20.5%	19.5%
Marijuana	9,325	10,069	2,432	2,739	26.1%	27.2%
Cocaine/Crack	6,837	7,105	273	128	4.0%	1.8%
Methamphetamine	2,992	3,224	138	123	4.6%	3.8%
Heroin	1,702	1,706	52	28	3.1%	1.6%
Other Drugs*	1,003	1,446	119	124	11.9%	8.6%

Source: Missouri Department of Mental Health, CTRAC System.

** Includes PCP, tranquilizers, amphetamines, other opiates, inhalants, LSD, other hallucinogens, etc.*

VII Description of Measure

The average age of first use of alcohol, cigarettes, and marijuana among students who have ever used these substances is measured by the Missouri Student Survey administered by ADA and Community 2000 Support Centers in cooperation with the Department of Elementary and Secondary Education. The survey is conducted every other year (even numbered years) for sixth, eighth, tenth, and twelfth grade students statewide. Approximately 10,000 students are surveyed.

The targeted increase in the age of onset has been aggressively set for the five pilot sites identified in the discussion of Key Strategies located on the next page. The Department seeks to increase the age of onset by 1 year of age by FY 2004.

VIII Key Strategies

A. Implement with DESE school-based prevention and intervention initiative beginning with 2002-2003 school year in five sites throughout the State, with expansion to other sites in subsequent years.

1. The Departments of Elementary and Secondary Education and Mental Health have developed a science-based substance abuse prevention and intervention initiative with local school systems. Planning, decision-making, implementation and operation and ongoing monitoring of the initiative are shared by both departments. The Departments to date have conducted joint presentations, focus groups, planning meetings, training activities, as well as other planning activities.

2. The school based prevention and intervention initiative is funded by a combination of general revenue, Alcohol and Drug Abuse block grant funds, Safe and Drug Free School funding and Medicaid. Universal prevention and selective intervention will be funded with Alcohol and Drug Abuse block grant, Safe and Drug Free School, and state general revenue funds. Medicaid may be used to fund some selective intervention services. Indicated services will be funded with Alcohol and Drug Abuse Block grant funds, general revenue and Medicaid.

3. School age children, kindergarten through twelve, (regardless of income level) are the target population. Service limitations will exist for some age groups due to existing program limitations. Anticipated outcomes include reduction of substance abuse by Missouri's children and youth; increase in academic achievement; decrease in acts of violence; strengthening of bonds between families, communities and the schools; and delay of onset of first use of alcohol and other drugs.

B. Pending receipt of the State Incentive Grant, implement interdepartmental cooperation in prevention planning and programming. The Governor has applied for a State Incentive Cooperative Agreement (SIG grant) from the Center for Substance Abuse Prevention (CSAP), Substance Abuse and Mental Health Services Administration (SAMHSA). DESE and DMH will be members of the SIG Advisory Committee, which will develop and oversee implementation of plans to prevent substance use by children 12 to 25 years of age. [An application was resubmitted, June 19, 2002.]

C. Implement public awareness activities as part of the ongoing statewide prevention plan.

D. Implement science based prevention programming addressing individual, peer, family, community and environmental risk factor domain.

KEY OBJECTIVE 1C: Increase Number of Alcohol and Drug Abusing Pregnant Women Admitted to CSTAR Programs by 5% By 2006

I Why This Measure is Important

The effects of substance use on a growing fetus can be devastating in terms of problems at birth and throughout the child's life. Substance use can lead to problems such as low birth weight, premature births, congenital anomalies, fetal distress, stillbirth, mental retardation, and neurobehavioral problems. A single Fetal Alcohol Syndrome child can cost the State over a million dollars in medical and educational expenses over their lifetime, not to mention the financial, emotional, and physical toll on the family. Due to the need to prevent this devastation, the Substance Abuse and Mental Health Services Administration's Substance Abuse Prevention and Treatment Block Grant requires priority admission for pregnant women into substance abuse treatment.

The number of Missouri resident births in 2000 was 76,329. The prevalence data gathered by the Department of Health shows that in 1993 there were an estimated 23,925 perinatal exposures to licit and illicit substances. Their study reported a prevalence of perinatal exposure to alcohol, tobacco, or illicit drugs with 10.8% for illicit substances, 21.9% for tobacco use, and 7.9% for self-reported alcohol use. Using their data, we can estimate that 8,243 women were using illicit drugs and 6,030 women were using alcohol at the time of their children's births in 2000. However, the number of pregnant women assessed at admission to Division of Alcohol and Drug Abuse programs in 2001 was only 289 (see Table 1.6 below).

TABLE 1.6

Clients Pregnant When Admitted to Women and Children's CSTAR Program, 1995-2001

	1995	1996	1997	1998	1999	2000	2001
Clients Pregnant When Admitted	270	241	281	211	258	288	289

Source: Status Report on Missouri's Alcohol and Drug Abuse Problems, 8th Ed., January 2002

Incidences of drinking and illicit substance abuse by pregnant women appear to be extremely underreported. Missouri Department of Health and Senior Services reported "Pregnant Drinking" by only 548 women out of 76,329 total births in 2000. Only two Fetal Alcohol Syndrome babies were reported in 2000, with 228 newborns reported to have been affected by alcohol and other drugs. Out-of-home placements due to parental alcohol and/or drug use were reported for 1,375 children.

II Trend Analysis

The trend over the past ten years has been for the "reported drinking during pregnancy" figure to decline from 2,146 in 1990 to 548 in 2000. The trend for "reported drug affected births" has decreased from 403 in 1995 to 255 in 2000.

Missouri has made gains among several indicators that promote healthy pregnancies and result in healthy babies. The Department of Health and Senior Services Strategic Plan reports the following trends:

- The percent of pregnant women receiving adequate prenatal care increased from 82.1% in 1990 to 89.5%; and
- The percent of births resulting in healthy birth weight babies was at 90.2% in 1999 compared to 75.7% in 1994.

The number of pregnant women entering substance abuse treatment increased from 270 in 1995 to 289 in 2001.

III How Missouri Compares to Others

Missouri has been a national leader in the area of substance abuse treatment for pregnant women. In 1991, the Division of Alcohol and Drug Abuse responded to an organized request from the community regarding services for the growing number of impaired infants born to addicted mothers. The Comprehensive Substance Treatment and Rehabilitation (CSTAR) program was developed to meet the needs of pregnant and postpartum women and their children. Many other states and national organizations look to Missouri for guidance on how to develop appropriate and comprehensive programming for women.

Epidemiological studies conducted in other states have shown the prevalence of alcohol and illegal drug use by pregnant women to be around 12%.

IV Factors Influencing the Measure

Many factors influence a woman's decision to access substance abuse treatment. She may be in denial that her use is causing problems. She may be in a domestic violence situation where fear keeps her in an unsafe situation. She may be afraid she will lose her children if someone knows she uses drugs. She may not know that help is available.

The CSTAR model of treatment has attempted to remove as many barriers to treatment as possible. Children can accompany their mothers to treatment. Transportation to the facility is available. Residential treatment is an option.

RSMo Chapter 191 requires physicians to assess pregnant women for substance abuse and make appropriate referrals to treatment. Education programs have been established for physicians regarding counseling techniques for substance abusing women.

V What Works

Substance abuse treatment for pregnant women and women with dependent children in the State of Missouri has expanded remarkably over the past eleven years. The Comprehensive Substance Treatment and Rehabilitation (CSTAR) program was developed to meet the needs of pregnant and postpartum women and their children. Eleven agencies have opened multiple treatment sites specifically designed for women and children. In FY 2001, 11,650 women were served in CSTAR. Additionally, their dependent children were provided childcare and treatment for physical, emotional and behavioral conditions brought about by their mothers' addictions.

CSTAR programs allow women and their children to receive multiple levels of care depending on assessed need. CSTAR programs are available in each region of the state. The Division has maintained certification standards for contracted agencies that require priority services for pregnant women. In FY 2001, 289 pregnant women requested and received treatment along with prenatal care and referrals in accordance with CSTAR Certification Standards and contractual requirements. Nursing services are available at the program site and a community support worker assists the mother with necessary medical referrals and scheduling of appointments. Childcare is provided on-site or arranged at all CSTAR programs specializing in treatment of women and children. Contract monitoring and certification surveys insure that pregnant women receive top priority for services, that pregnant women are receiving prenatal care, and that children are receiving safe and appropriate childcare.

Each women's program is required to provide a development program for the children of women who are concurrently receiving treatment. The mothers receive extensive weekly training on parenting skills and one hour a day of supervised parent/child bonding time to practice the new skills.

The women and their children receive residential support or supportive housing to assure a safe, drug-free environment. All women and children who enter treatment are provided health screenings by registered nurses to identify health deficits or needs for medical intervention. Close association with local health clinics provides prenatal care, immunizations, and other preventive measures to increase the well-being of mothers and their children. For women receiving day treatment and outpatient services, transportation is available to and from the facility. Additionally, a community support worker is assigned to each family and makes appropriate community linkages in order to meet the individual needs of that family.

The goal of admitting more pregnant substance users to CSTAR programs fits the DHSS goals to "Decrease the estimated percent of pregnant women who use or abuse addictive substances by 2006" and in particular to "Increase the percent of pregnancies which result in healthy birth weight babies." It is known with certainty that once a pregnant, addicted woman is admitted to a CSTAR program, her chance for delivering a drug-free baby is dramatically improved.

TABLE 1.7

Drug-Free Births to Women in CSTAR Programs
FY 1999-2002

Fiscal Year	Babies Born	Drug Free	Percent	Comment
1999	89	56	63%	Extended day treatment began
2000	78	62	79%	
2001	67	65	97%	
2002*	67	61	91%	
TOTAL	301	244		

*Year to date through March 2002
Source: Division of Alcohol and Drug Abuse.

VI Concerns

While the trends overall are positive, there are significant sections of the population that need targeted interventions if further progress is to be made in prenatal and healthy birth outcomes. The rates for infants born small for gestational age (SGA), and very low birth weight infants (VLBW) have not varied significantly from 1994 to 1997. The Division of Alcohol and Drug Abuse must find ways to engage and treat more pregnant substance using women.

VII Description of Measure

The Division will continue to monitor the number of pregnant women admitted to publicly funded substance abuse treatment.

VIII Key Strategies

A. Continue to provide high-quality CSTAR programming for women and children;

B. Continue to make pregnant women a priority population for treatment services;

C. Assist contracted, community-based CSTAR providers in developing outreach plans and activities targeted at pregnant women and the professionals that serve them;

D. Work collaboratively with the Department of Health and Senior Services on implementation of RSMo Chapter 191 regarding pregnant women; and

E. Provide enhanced education to physicians, nurses, and other healthcare providers on assessment, referral, and treatment of pregnant substance abusing women.

KEY OUTCOME 2: Reduced Rate of Suicides in Missouri

I Why This Measure is Important

Suicide is a particularly awful way to die: the mental suffering leading up to it is usually prolonged, intense, and unpalliated. There is no morphine equivalent to ease the acute pain, and death not uncommonly is violent and grisly. The suffering of the suicidal is private and inexpressible, leaving family members, friends, and colleagues to deal with an almost unfathomable kind of loss, as well as guilt. Suicide carries in its aftermath a level of confusion and devastation that is, for the most part, beyond description.

Kay Redfield Jamison

Suicide exacts an enormous toll. Missouri loses 700 lives to this tragedy each year; another 6700 receive emergency care after attempting to take their own lives.

Persons who experience the loss of someone close as a result of suicide experience tremendous emotional trauma. Suicide is a special burden for certain age, gender, and ethnic groups, as well as particular geographic regions.

Suicide is very costly to the state. In addition to the emotional suffering experienced by family members of those who have died by suicide and the physical pain endured by those who have attempted suicide, there are financial costs. However, attempts to compute such costs on a national basis are based on incomplete data (e.g., underreporting of suicides and an absence of reliable data on suicide attempts); in addition, such estimates, like economic analyses of other health problems, are of necessity based on certain assumptions, and the accuracy of these cannot always be assured. Consequently, there is no firm consensus on the true dollar costs of suicide. If we were to extrapolate from one economic analysis, however, we could "guesstimate" the total economic burden of suicide in Missouri, in 1995, to have been $2.2 billion; this includes medical expenses of $73.6 million, work-related losses of $545.6 million, and quality of life costs of $1.6 billion (estimated from Miller et al., 1999).

Only recently have the knowledge and tools become available to approach suicide as a preventable problem with realistic opportunities to save many lives.

Nearly half of the States are engaged in suicide prevention and many have already committed significant resources to implement programs.

II Trend Analysis

While the overall suicide rate in the United States is decreasing, the increasing rates for various age, gender and ethnic groups indicate disturbing trends. The suicide rate, which was 21.1 per 100,000 in 1976 declined to 10.8 in 1996. Many communities of Native Americans have long had elevated suicide rates. On Average, 85 Americans die from suicide each day.

Missouri's data, like other states is not fully adequate to the task of accurately describing the extent and nuances of suicide. Unfortunately, secrecy and silence diminish the accuracy and amount of information available about persons who have completed suicide – information that might help prevent other suicides. It is generally agreed that not all deaths that are suicides are reported as such. For example, deaths classified as homicide or accidents, where individuals may have intentionally put themselves in harm's way are not included in suicide rates. However, Missouri's existing data does provide us with a good starting point.

On the average, 59 Missourians die from suicide each month. Although more females attempt suicide than males, males are at least five times more likely to die from suicide. The most frequent cause of suicide deaths was firearms. In 1997 they were used in 65% of the suicides. Firearms were used most often by 15-24 year olds and those aged 65 and over. After firearms, poisoning was the next most frequently use method of killing oneself (18%), followed by suffocation and strangulation (13%), (MMVS, Vol.32, #12, Feb. 1999).

During 1997, blacks in Missouri visited hospitals for self-inflicted injuries at a rate that was 12% higher than that for whites: 137 per 100,000 population versus 122. In contrast, the death rate for suicides was almost two times higher for whites than for blacks: 14.1 versus 7.4 (MMVS, Vol.32, #12, Feb. 1999).

Males were much more likely to die of suicide. In 1997, males had a suicide rate of 21.6 per 1000. This was nearly five times the female rate of 4.2. Males aged 65 and over had the highest suicide rate at 41.4. Among females the rate reached a high of 6.7 in 25-44 year olds (MMVS, Vol.32, #12, Feb. 1999).

Men complete suicide more often than women, whereas females make more attempts. In 1997, males made up 83% of the 710 suicides. Females were nearly 50% more likely than males to be hospitalized or visit an emergency room for a self-inflicted injury. The rate for self-injury was highest among 15-24 year olds for both genders (MMVS, Vol.32, #12, Feb. 1999).

III How Missouri Compares to Others

Missouri's suicide rate is higher than the national. In 1997 the U.S. whole population rate was 10.6 suicides per 100,000 persons while Missouri had a rate of 12.4 deaths per 100,000 persons average (Table 2.1). When suicides were analyzed over a

four-year period from 1990 to 1994 Missouri ranked in the second highest quartile nationally. With an age adjusted suicide rate of 12.6 deaths per 100,000, this was higher than any of the surrounding mid-western states. Missouri's rate was 15% higher than the Midwest average of 10.9 deaths per 100,000 and 10% higher than the national average of 11.8 deaths per 100,000.

TABLE 2.1

Nationwide versus Missouri Suicide Rates (Age-Adjusted) By Year
Number of Suicides per 100,000 Population

Year	Nationwide	Missouri	Missouri Percentage Above National Rate
1990	11.7	13.0	11.1%
1993	11.8	12.6	6.8%
1994	11.2	13.4	19.6%
1995	11.2	13.0	16.1%
1996	10.8	13.6	25.9%
1997	10.6	12.4	17.0%
1998	10.0	12.2	22.0%

Source: Missouri Department of Health, Centers for Disease Control & Prevention.

IV Factors Influencing the Measure

Suicide is an outcome of complex interactions among neurobiological, genetic, psychological, social, cultural, and environmental risk and protective factors. Multiple risk and protective factors interact in suicide prevention.

Risk factors may be thought of as leading to or being associated with suicide; that is, people "possessing" the risk factors are at greater potential for suicidal behavior. Protective factors, on the other hand, reduce the likelihood of suicide. They enhance resilience and may serve to counterbalance risk factors. Risk and protective factors may be biopsychological, environmental, or sociocultural in nature.

However, the impact of some risk factors can clearly be reduced by certain interventions (such as providing lithium for manic depressive illness or strengthening social support in a community)(Baldessarini, Tando, Hennen, 1999). Risk factors that cannot be changed (such as a previous suicide attempt) can alert others to the heightened risk of suicide during periods of the recurrence of a mental or substance abuse disorder or following a significant stressful life event (Oquendo *et al*., 1999).

Measures that enhance protective factors play an essential role in preventing suicide. However, positive resistance to suicide is not permanent. Therefore, programs that support and maintain protection against suicide should be ongoing.

◄ Risk Factors for Suicide

◊ Biopsychosocial Risk Factors

- Mental disorders, particularly mood disorders, schizophrenia, anxiety disorders and certain personality disorders
- Alcohol and other substance use disorders
- Hopelessness
- Impulsive and/or aggressive tendencies
- History of trauma or abuse
- Some major physical illnesses
- Previous suicide attempt
- Family history of suicide

◊ Environmental Risk Factors

- Job or financial loss
- Relational or social loss
- Easy access to lethal means
- Local clusters of suicide that have a contagious influence

◊ Sociocultural Risk Factors

- Lack of social support and sense of isolation
- Stigma associated with help-seeking behavior
- Barriers to accessing health care, especially mental health and substance abuse treatment
- Certain cultural and religious beliefs (for instance, the belief that suicide is a noble resolution of a personal dilemma)
- Exposure to, including through the media, and influence of others who have died by suicide

◄ Protective Factors for Suicide

- Effective clinical care for mental, physical, and substance use disorders
- Easy access to a variety of clinical interventions and support for help-seeking
- Restricted access to highly lethal means of suicide
- Strong connections to family and community support
- Support through ongoing medical and mental health care relationships
- Skills in problem solving, conflict resolution, and nonviolent handling of disputes
- Cultural and religious beliefs that discourage suicide and support self-preservation

V What Works

Preventing suicide requires a comprehensive and integrated approach to reducing the loss and suffering from suicide and suicidal behaviors across the life course. It encompasses the promotion, coordination, and support of activities that will be implemented across the state as culturally appropriate, integrated programs for suicide prevention among Missourians at state, regional, tribal, and community levels.

Comprehensive suicide prevention programs are believed to have a greater likelihood of reducing the suicide rate than are interventions that address only one risk or protective factor, particularly if the program incorporates a range of services and providers within a community. Comprehensive programs engage community leaders through coalitions that cut across traditionally separate sectors, such as health and mental health care, public health, justice and law enforcement, education and social services. The coalitions involve a range of groups, including faith communities, civic groups, and business. Suicide prevention programs need to support and reflect the experience of survivors, build on community values and standards, and integrate local, cultural and ethnic perspectives (U.S. Department of Health and Human Services, 1999). Comprehensive prevention programs:

- Draw attention to a wide range of actions so that specific activities can be developed to fit the resources and areas of interest of people in everyday community life as well as professionals, groups, and public agencies. As the eighth leading cause of death among Americans, suicide affects families and communities everywhere across the nation. Suicide prevention is everyone's business.

- Seek to integrate suicide prevention into existing health, mental health, substance abuse, education, and human services activities. Settings that provide related services, such as schools, workplaces, clinics, medical offices, correctional and detention centers, eldercare facilities, faith-based institutions, and community centers are all important venues for seamless suicide prevention activities.

- Guide the development of activities that will be tailored to the cultural contexts in which they are offered. While universal interventions are applicable without regard to risk status, universal does not mean that one size fits all. The cultural and developmental appropriateness of suicide prevention activities derived from these goals and objectives is a vital design and implementation criteria.

- Seek to eliminate disparities that erode suicide prevention activities. Health care disparities are attributable to differences such as race or ethnicity, gender, education or income, disability, age, stigma, sexual orientation, or geographic location.

- Emphasize early interventions to reduce risk factors for suicide and promote protective factors. As important as it is to recognize and help suicidal individuals, progress depends on measures that address problems early and promote strengths so that fewer people become suicidal.

- Seek to build the State's capacity to conduct integrated activities to reduce suicidal behaviors and prevent suicide. Capacity building will ensure the availability of the resources, experience, skills, training, collaboration, evaluation, and monitoring necessary for success.

A broad public/private partnership is essential for developing and implementing this outcome. Interwoven are three key ingredients for action to improve suicide prevention:

- A knowledge base;
- The public will to support change and generate resources; and
- A social strategy to accomplish change.

Adopting this outcome provides an opportunity to convene public and private partners across many sectors of society – government, public health, education, human services, religion, voluntary organizations, advocacy, and business - to sustain a true, statewide effort.

Department of Mental Health in partnership with the Department of Health is in the process of finalizing a state suicide prevention plan using statewide community input and participation of other state agencies to achieve the comprehensive community based approach necessary for effective prevention.

VI Concerns

Understanding the interactive relationship between risk and protective factors in suicidal behavior and how this interaction can be modified are challenges to suicide prevention (Móscicki, 1997). Unfortunately, the scientific studies that demonstrate the suicide prevention effect of altering specific risk or protective factors remain limited in number.

Efficacy studies test whether a preventive or treatment intervention works under ideal conditions. It is frequently difficult to conduct efficacy studies, although in the absence of such studies, if an intervention does not work, there is no way to know if that is because the program idea was flawed or because the implementation was flawed.

The interventions recommended here were developed by a national expert consensus process lasting over two years under the leadership of Surgeon General David Satcher. They are endorsed at the "best practices" for suicide prevention.

While data provide an overall view of the problem, State and local suicide rates vary considerably from national rates. Local data are key to effective prevention efforts. It is important to note, however, that local suicide rates, due to the significant fluctuations that occur in small populations, are often not useful in evaluating the effectiveness of suicide prevention programs in the short-run. "Proxy" measures may work better, including changes in risk and protective factor.

Over the last fifty years, suicide rates have been quite stable over the whole population. Changing Missouri's statewide suicide rate will require significant effort and resource over a long timeframe. It is unrealistic to expect significant changes without committing significantly more resources over a period of at least five to eight years. Reducing the suicide rate for young Missourians and elderly men in Missouri will require multiple prevention activities in most communities over several years. Many of the risks and protective factors for suicide and therefore the interventions to address them are the same as those for substance abuse. The suicide prevention and substance abuse prevention initiatives need to be coordinated so that their messages and interventions are complementary and mutually reinforcing.

VII Description of Measure

It is generally agreed that not all deaths that are suicides are reported as such. Deaths may be misclassified as homicides or accidents where individuals have intended suicide by putting themselves in harm's way and lack of evidence does not allow for classifying the death as suicide. Other suicides may be misclassified as accidental or undetermined deaths in deference to community or family. Many studies suggest that the actual suicide rate is considerably higher than recorded (Clark *et al*., 1992; Gibbs *et al*., 1988; O'Carroll, 1989).

Whole Population Suicide Rate

- Definition: Suicide Rate in Missouri
- Numerator: Number of Suicides per Year Occurring in Missouri
- Denominator: Estimated Missouri Population

Data source for above numerators and denominators is the Department of Health death certificate file at the state data center and the census 2000 data and population projections from the Missouri State Census Data Center.

KEY OBJECTIVE 2A: Reduce the Rate of Suicides Among Young Missourians to within 6% of the Nationwide Rate by 2006

I Why This Measure is Important

For young people 15-24 years old, suicide is the third leading cause of death, behind unintentional injury and homicide. In 1996, more teenagers and young adults died of suicide than from cancer, heart disease, AIDS, birth defects, stroke, pneumonia and influenza, and chronic lung disease combined.

II Trend Analysis

Nationally, over the last several decades, the suicide rate in young people has increased dramatically. From 1952-1996, the incidence of suicide among adolescents and young adults nearly tripled, although there has been a general decline in youth suicides since 1994. From 1980-1996, the rate of suicide among persons aged 15 years increased by 14% and among persons aged 10-14 years by 100%. For African-American males aged 15-19, the rate increased 105%.

Among persons aged 15-19 years, firearm-related suicides accounted for 63% of the increase in the overall rate of suicide from 1980-1996.

The risk for suicide among young people is greatest among young white males; however, from 1980 through 1996, suicide rates increased most rapidly among young black males.

Males under the age of 25 are much more likely to commit suicide than their female counterparts. The 1996 gender ratio for people aged 15-19 was 5:1 (male/females), while among those aged 20-24 it was 7:1.

In a survey of students in 151 high schools around the country, the 1997 Youth Risk Behavior Surveillance System found that Hispanic students (10.7%) were significantly more likely than white students (6.3%) to have reported a suicide attempt. Among Hispanic students, females (14.9%) were more than twice as likely as males (7.2%) to have reported a suicide attempt. But Hispanic male students (7.2%) were significantly more likely than white male students (3.2%) to report this behavior.

In Missouri, the rate of suicide for 10-14 year olds over the last nine years has ranged from .3 per 100,000 (representing a single suicide) to 4.3 per 100,000 in 1996 (representing 9 suicides). Statistically these numbers are so small that the variation does not represent a significant trend over the nine- year period (Tables 2.2

& 2.3). For the next five- year period of life 15–19 years of age the suicide rate goes up significantly but it is still slightly less than the general population rate; whereas for persons 20-24 years old, the suicide rate is slightly more than the general population rate (Table 2.2). The combined rate for persons 15-24 years of age has remained essentially steady over the last ten years.

TABLE 2.2

Missouri Suicide Rates (Not Age-Adjusted)
Number of Suicides per 100,000 Population
1990-1999

Year	Statewide Rate	10-14 Years	15-19 Years	20-24 Years	Combined 15-24 Years	Males 65 & Over
1990	13.9	1.1	11.6	12.4	12.0	51.8
1991	13.9	0.3	13.6	14.8	14.2	44.8
1992	12.2	2.1	13.7	15.5	14.6	40.8
1993	13.3	1.5	12.0	17.0	14.5	45.0
1994	14.0	1.0	13.0	18.9	15.9	40.0
1995	13.6	1.8	13.1	20.9	16.9	41.6
1996	14.3	2.3	11.4	21.2	16.0	45.6
1997	13.1	2.2	10.9	12.8	11.8	41.1
1998	12.7	1.8	11.2	15.8	13.3	33.7
1999	12.8	1.7	12.6	16.0	14.2	38.5

Source: Missouri Department of Health.

TABLE 2.3

Number of Suicides in Missouri
1990-1999

Year	Statewide Total	10-14 Years	15-19 Years	20-24 Years	Combined 15-24 Years	Males 65 & Over
1990	714	4	42	45	87	146
1991	719	1	48	54	102	128
1992	635	8	48	57	105	118
1993	697	6	43	62	105	132
1994	740	4	48	68	116	118
1995	726	7	50	74	124	124
1996	768	9	45	73	118	137
1997	710	9	44	44	88	124
1998	691	7	46	55	101	102
1999	698	7	52	57	109	117

Source: Missouri Department of Health.

III How Missouri Compares to Others

In 1997 Missouri's suicide rate was higher in all three, five-year age brackets than the U.S. rate. Missouri's rate for combined 15-24 year olds is 12.4% higher than the US Rate.

TABLE 2.4
1997 Nationwide vs. Missouri Suicide Rates (Not Age Adjusted)
Number of Suicides per 100,000 Population

	Whole Population	10-14 yr	15-19 yr	20-24 yr	Combined 15-24 yr	Males 65 & Over
United States	11.3	1.6	8.7	12.4	10.5	35.0
Missouri	13.1	2.2	10.9	12.8	11.8	41.1

Source: MO Department of Health Centers for Disease Control & Prevention

% MO Rate greater than US Rate	*15.9%*				*12.4%*	*17.4%*

IV Factors Influencing the Measure

Important risk factors for attempted suicide in youth are depression, alcohol or other drug use disorder, and aggressive or disruptive behaviors.

V What Works

See same section under Outcome 2.

VI Concerns

See same section under Outcome 2.

VII Description of Measure

The Department in cooperation with other agencies and community providers seeks to reduce the rate of suicides among young Missourians to within 6% of the nationwide rate of suicide by FY 2006. This would effectively reduce the margin of difference by half.

Taking the net difference in rates and dividing that by the US rate will calculate the percentage difference between the two rates.

Suicide Rate Among Persons Aged 15-24 in the United States will be obtained from the U.S. Centers for Disease Control and Prevention.

Suicide Rate Among Young Missourians*

- Definition: Suicide Rate Among Young Missourians
- Numerator: Number of Suicides in Persons Aged 15-24 Occurring in

Missouri, per Year

- Denominator: Estimated Missouri Population of Persons Aged 15-24 Years Old

Data source for above numerators and denominators is the Department of Health and Senior Services death certificate file at the state data center and the census 2000 data and population projections from the Missouri State Census Data Center.

** Persons aged 10-14 years of age were not included in this measure because their suicide rate is only one-tenth that of the included age range and the absolute numbers are so low as to be unlikely to influence a total measure and not amenable to a public health statistical intervention approach.*

VIII Key Strategies

A. Continue implementation of recommendations from the Missouri Suicide Prevention Plan (see Appendix I on page 33). DMH in partnership with the Department of Health and Senior Services has developed a Missouri Suicide Prevention Plan. Community input was elicited at regional and statewide meetings.

1. DMH will initially focus on developing training and education opportunities for professional caregivers who provide services to high-risk populations (Missouri Suicide Prevention Plan – Activity 2) and disseminating gatekeeper training (Missouri Suicide Prevention Plan – Activity 5). Gatekeepers might include anyone who by virtue of their daily activities comes into contact with individuals that may be at risk for suicide and then could potentially recognize a person at risk and refer them for help.

   - Train professional caregivers who serve high-risk populations.

     - Prepare educational materials for professionals about the risk factors and techniques to assist those at risk.

     - Provide training and education materials for Substance Abuse and Mental Health case managers caring for DMH consumers.

     - DMH, in conjunction with DHSS, DESE, DOSS, and DOC will annually include information about suicide prevention in existing public forums targeting the following groups: social services, health and mental health professionals; school administrators, counselors, and classroom teachers.

   - Assure that gatekeepers utilize resources and referral mechanisms.

- DMH will work in conjunction with other Departments to provide education and training to individuals annually that work in education, health (including mental health and aging), and social services.

2. DMH will collaborate with DHSS to obtain endorsement of "The Missouri Suicide Prevention Plan" by the Legislature, Governor's Office and other executive departments.

B. Increase geographic coverage and capacity of suicide prevention initiative targeted at adolescents and the elderly contracted through DMH, Division of Comprehensive Psychiatric Services (CPS).

1. The initial $150,000 pilot proposal elicited more good quality proposals than could be funded. There is unutilized expertise available in Missouri that could be rapidly put in place to provide suicide prevention interventions for a larger number of communities across the state.

2. Reducing the suicide rate for young Missourians and elderly men in Missouri will require multiple prevention activities in most communities over several years. One or more new budget items will be proposed to build Missouri's suicide prevention capacity sufficiently to make a difference.

C. Increase coordination of suicide prevention strategies with strategies outlined in Key Outcome 1: Reduced Deaths and Injuries Associated with Substance Abuse.

1. Substance abuse prevention activities are also suicide prevention activities. Substance abuse is a major risk factor for suicide. The rate of suicide among persons with alcohol dependence is almost as high as for persons with depression. All phases of substance abuse prevention, including primary prevention and screening and early intervention for substance abuse problems will also have a direct contribution to suicide prevention. Focusing attention and resources on substance abuse prevention will be a strong primary prevention strategy for reducing Missouri's suicide rate.

2. Primary prevention, focused on risk factors and protective factors are identical for both substance abuse and suicide prevention and are best integrated into a single approach. Screening and early intervention activities, while not identical, can be presented in a complementary, mutually reinforcing manner.

3. Seek to have DMH prevention activities bid and managed through a single system.

KEY OBJECTIVE 2B: Reduce the Rate of Suicides Among Elderly Males in Missouri to within 9% of Nationwide Rate by 2006

I Why This Measure is Important

Suicide rates increase with age and are highest among Americans aged 65 years and older. While this age group accounts for only 13% of the U.S. population, Americans 65 or older account for 20% of all suicide deaths. In 1996, men accounted for 84% of suicides among persons aged 65 years and older. The highest suicide rates in the country that year were among white men over 85, who had a rate of 65.3 per 100,000. The elderly experience more loss related suicide risk factors than other populations including loss of:

- Income;
- Health;
- Social network;
- Job; and
- Health.

Nearly 5 million of the 32 million Americans aged 65 and older suffer from some form of depression. Depression, however, is not a "normal" part of aging.

II Trend Analysis

- Nationally suicide rates continue to remain high with a slight downward trend in older age groups, especially with white American males aged 65 years and older.

- From 1980-1996, the largest relative increases in suicide rates occurred among people 80-84 years of age. The rate for men in this age group increased 16% (from 43.5 per 100,000 to 50.6).

- Firearms were the most common method of suicide by both males and females, 65 years and older, 1996, accounting for 78% of male and 36% of female suicides in that age group.

- Suicide rates among the elderly are highest for those who are divorced or widowed. In 1992, the rate for divorced or widowed men in this age group was:

  - 2.7 times that for married men;
  - 1.4 times that for never married men; and
  - More than 17 times that for married women.

The rate for divorced or widowed women was:

- 1.8 times that for married women; and
- 1.4 times that for never married women.

- Most elderly suicide victims (70%) have visited their primary care physician in the month prior to their committing suicide.

- In Missouri, the rate of suicide for males over age 65 is 3 to 4 times that of the general population. However, this rate is showing a downward trend over the past nine years, from 51.8 deaths per 100,000 in 1990 down to 38.5 deaths in 1999, the most recent year for which data in Missouri is available.

III How Missouri Compares to Others

In 1997 Missouri's suicide rate for males 65 years of age and older was 41.1 per hundred thousand, which is 17.4% higher than the U.S. rate of 35 per 100,000 for the same year (Table 2.4).

TABLE 2.4
1997 Nationwide vs. Missouri Suicide Rates (Not Age Adjusted)
Number of Suicides per 100,000 Population

	Whole Population	10-14 yr	15-19 yr	20-24 yr	Combined 15-24 yr	Males 65 & Over
United States	11.3	1.6	8.7	12.4	10.5	35.0
Missouri	13.1	2.2	10.9	12.8	11.8	41.1
% MO Rate greater than US Rate	*15.9%*				*12.4%*	*17.4%*

Source: MO Department of Health Centers for Disease Control & Prevention

IV Factors Influencing the Measure

Risk factors for suicide among older persons differ from those among the young. In addition to a higher prevalence of depression, older persons are more socially isolated and more frequently use highly lethal methods. They also:

- Make fewer attempts per completed suicide;
- Have a high male-to-female ratio than other groups;
- Have often visited a healthcare provider before their suicide; and
- Have more physical illnesses.

V What Works

See same section under Outcome 2.

VI Concerns

See same section under Outcome 2.

VII Description of Measure

The Department in cooperation with other agencies and community providers seeks to reduce the rate of suicides among elderly male Missourians to within 9% of the nationwide rate of suicide by FY 2006. This would effectively reduce the margin of difference by half.

Taking the net difference in rates and dividing that by the US rate will calculate the percentage difference between the two rates.

Suicide Rate Among Male Persons Aged 65 and over in the United States will be obtained from the U.S. Centers for Disease Control and Prevention.

Suicide Rate Among Elderly Males in Missouri

- Definition: Suicide Rate Among Elderly Males in Missouri
- Numerator: Number of Suicides that Occur Among Men Age 65 and Older Occurring in Missouri per Year
- Denominator: Estimated Missouri Population of Men Age 65 Years and Older

Data source for numerators and denominators is the Department of Health and Senior Services death certificate file at the state data center and the census 2000 data and population projections from the Missouri State Census Data Center.

VIII Key Strategies

See Key Strategies identified in Objective 2A.

APPENDIX I: MISSOURI SUICIDE PREVENTION PLAN RECOMMENDATIONS

STRATEGY 1 - Awareness: Increase Awareness About the Preventability of Suicide.

In Missouri, the suicide prevention messages should be consistent between all those engaged with awareness efforts. Those messages should include information regarding:

- ✓ Risk and protective factors;
- ✓ Availability of effective treatments for mental illness and substance abuse disorders;
- ✓ The importance of screening and early interventions; and
- ✓ Acceptability of asking for help around mental health issues.

ACTIVITY 1: DEVELOP A STATEWIDE PUBLIC AWARENESS CAMPAIGN FOR THE GENERAL PUBLIC.

- Will develop public service announcements, brochures, billboards, videos, Internet Web sites, and a speaker's bureau to educate the public about suicide and its risk and protective factors in conjunction with the Departments of Health (DHSS), Mental Health (DMH), Social Services (DOSS), Elementary and Secondary Education (DESE), and Corrections (DOC).
- Use Community partnerships/Caring communities to distribute information to raise awareness.
- Local implementation of national awareness programs, such as the "Yellow Ribbon" program and the "Life Keeper" Quilt effort.
- Publish national and state suicide prevention hotline numbers.
- Add links at existing Web sites that explain the risk and protective factors of suicide.
- Will develop strategies to target the following groups to receive public awareness campaign materials:
  - Journalist, including print and broadcast media;
  - School boards, school administrators, counselors, and classroom;
  - Teachers;
  - Social services, health, and mental health professionals;
  - Public officials, libraries, and clergy; and
  - Bookstores.
- Develop a resource guide both in hard copy and on the Web.
- Include sessions on suicide prevention as part of conferences and trainings that address injury, violence (including domestic violence), and other health issues.

ACTIVITY 2: DEVELOP TRAINING & EDUCATION OPPORTUNITIES FOR PROFESSIONAL CAREGIVERS WHO PROVIDE SERVICES TO HIGH-RISK POPULATIONS.

- Prepare educational materials for education professionals about the risk factors and techniques to assist those at risk.
- Develop specific education curricula for inclusion in school systems.
- Will integrate youth suicide prevention into existing adolescent health clinics and programs for pregnant and parenting teens.
- Provide training and educational materials for Substance Abuse and Mental Health case managers caring for DMH consumers.
- Provide training for probation and parole officers.
- DMH and Caring Communities will develop a resource guide for use by professional caregivers, such as Residential Care Facility, Nursing Home, Group Home, Senior Center, and Home Health Care staff.
- DHSS, DMH, DESE, DOSS, and DOC will annually each include information about suicide prevention in existing public forums targeting the following groups:
  - Social services, health, and mental health professionals;
  - School administrators, counselors, and classroom teachers; and
  - DOSS will provide training for case managers in the Divisions of Family Services (DFS), Youth Services (DYS), and Aging (DOA).

ACTIVITY 3: ENSURE THAT THE SUICIDE PREVENTION MESSAGE IS CONSISTENT ACROSS AGENCIES & THAT THE PREVENTION STRATEGIES & INFORMATION ABOUT THE RISK AND PROTECTIVE FACTORS ARE INTEGRATED INTO SUICIDE-RELATED MATERIALS OF ALL GROUPS & AGENCIES.

- Monitor the development of suicide prevention messages and assure that they are guided by the state plan.

STRATEGY 2 - Intervention: Improve Access & Availability of Prevention & Intervention Services.

ACTIVITY 4: INVOLVE LOCAL COMMUNITIES & SUPPORT LOCAL EFFORTS TO PREVENT SUICIDE BY ASSESSING & ACTING ON LOCAL RISK OR PROTECTIVE FACTORS.

- DMH will distribute information regarding the importance of implementing suicide prevention activities and identify partners for grassroots efforts, such as:
  - Medical and pharmaceutical stakeholders;

- Faith community;
- Elderly caregivers;
- Schools;
- Jails; and
- Employers.

- DMH will provide or assist in obtaining funding for prevention initiatives sponsored by local groups.
- DMH will facilitate formation of survivor support groups.

ACTIVITY 5: ASSURE THAT GATEKEEPERS* UTILIZE AVAILABLE RESOURCES & ACTIVELY USE THE MECHANISMS FOR REFERRAL.

Gatekeepers might include anyone who by virtue of their daily activities comes into contact with individuals that may be at risk for suicide and then could potentially recognize and refer for help. Examples could include teachers, clergy, employers, attorneys, letter carriers, correctional workers, home care providers, etc.

- DHSS and DMH in conjunction with other departments will provide education and training to individuals annually that work in education, health (including mental health and aging), and social services.
- DMH will review and recommend specific screening tools and make recommendations for its usage.
- DMH will establish training opportunities annually for local Gatekeepers in conjunction with other departments.
- DMH will increase public awareness of its statewide hotline.

ACTIVITY 6: INCREASE THE CAPACITY OF PROVIDER SYSTEMS TO SERVE THOSE AT RISK.

- DESE will assess and revise as needed at least five professional school curricula in the assessment and management of suicide risks, including:
  - Clinical social work;
  - Counseling;
  - Nursing, and psychology programs;
  - Medical schools and residency programs; and
  - Emergency Medical Technician training.
- DESE will increase ratio of mental health professional to students in schools by 5% above the baseline.

- DMH will develop protocols for suicide prevention in managed care systems.
- DMH will develop and the promote the use of protocols for follow-up to ongoing services after suicide risk is identified in hospital, emergency care and other treatment setting.
- DMH and DOSS will propose changes to Medicaid to assure access to prompt suicide prevention, mental health and substance abuse treatment services.
- DMH will propose to the legislature new or expanded programs to assure that high suicide risk groups have prompt access to suicide prevention, mental health and substance abuse treatment.

STRATEGY 3 - Methodology**:**	Assure that Suicide Prevention in Missouri is Evidence-Based & Data-Driven, Consistent with Community Values & Based in Consensus.

ACTIVITY 7: DEVELOP & MAINTAIN A SURVEILLANCE SYSTEM.

- Develop an ongoing system to regularly monitor suicide occurrences in Missouri will be established under DHSS leadership and in conjunction with other state agencies. This will include collecting data from existing sources as well as identifying and utilizing new reporting systems.
- By state FY 2003, DHSS will establish and implement avenues for the active dissemination of reports and information to all stakeholders and community members.

ACTIVITY 8: MAKE AVAILABLE BEST PRACTICES AND MODEL PREVENTION STRATEGIES & INTERVENTIONS.

- All new suicide prevention initiatives shall include and be funded for program evaluation to measure the efficacy of the intervention.
- DMH will assure that all Practice Guidelines developed and published under its leadership address aspects of suicide prevention applicable to the topic.

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KEY OUTCOME 3: Children with Severe or Multiple Mental Health Problems will Achieve Success Living in Their Communities

- There are approximately 6 million to 9 million children & adolescents in the United States with Serious Emotional Disturbance (SED), many of whom have co-occurring disorders, substance abuse &/or developmental disabilities along with these emotional disturbances.
- According to the National Co-morbidity Study, 41% to 65% of individuals with a lifetime substance abuse disorder also have a lifetime history of at least one mental disorder. The rates are highest in the 15 to 24 year old age group.
- It is estimated that in a 1-year period more than 700,000 children nationwide are in out-of-home placements.
- Students with SED miss more days of school per year (an average of 18 days) than do students in any other disability category.
- 48% of students with SED drop out of grades 9 through 12, as opposed to 30% of all students with disabilities and only 24% of all high school students.
- Of those students with SED who drop out of school, 73% are arrested within five years of leaving school.
- Long–term-school failure contributes to truancy, inability to work productively as adults, & a greater risk of involvement with the correctional or juvenile justice system.

Source: Chesapeake Institute of the American Institute for Research for the U.S. Department of Education Office of Special Education & Rehabilitative Services, September 1994; Mental Health: A Report of the Surgeon General (2000).

I Why This Measure is Important

Effectively serving and meeting the needs of children and youth with mental health problems (psychiatric and emotional disorders, developmental disabilities and substance abuse) and their families has become a national concern as evidenced by the Surgeon General's recent report on mental health. In one national epidemiology study it is estimated that almost 11 % of U.S. children ages 9 to l7 have a diagnosable mental or addictive disorder associated with at least significant impairment and 5% have extreme functional impairment. These children and youth often are placed in costly out of home programs; they often experience multiple placements by multiple agencies; they often are failing at school or not attending school and they are frequently involved with the juvenile justice system. There is research that when children and youth are not successfully connected to their family

(or in a home or homelike environment), connected and learning in school and connected in positive ways to their communities they are at greater risk of being unable to work productively as adults, are at greater risk of involvement with the correctional or juvenile justice system and at greater risk of long term involvement with the public mental health system.

Additionally, studies indicate that approximately 20% of these high-end youth utilize 80% of the resources (funds and bed days). These high need youth are often served in out-of-home care. It is striking however that the least amount of research regarding effectiveness of mental health services has been done on the most restrictive and heavily reimbursed treatment settings, e.g. inpatient and residential treatment centers. While there are several studies that point to youth improvement in residential care, the improvements are not sustained without strong support from and connection with the home, school, and community. Other studies indicate that, in fact, residential care can be a factor that increases risk of later incarceration in a juvenile or correctional setting.

Nationally, questions about excessive and inappropriate use of inpatient and residential placements were raised in the 1980's and clearly documented thereafter in rising admission rates from the 1980's into the mid-1990's, without evidence of increased social or clinical need for such treatment. DMH believes that some children will require hospital and residential care but no child should be required to use that level of costly restrictive care, unless it is what they need and not because other services are unavailable.

The Surgeon General's report calls for more concerted attention to the risks and benefits of hospital and residential care interventions, along with the capacity development of community-based alternative services such as case management, respite, and therapeutic foster homes. There is a growing research base that documents the effectiveness of these community-based services in enabling children and youth with severe emotional disturbances and with co-occurring disorders of developmental disabilities and substance abuse to remain in their homes, schools and communities.

Research regarding children and youth with co-occurring disorders who experience school failure is equally compelling in terms of negative outcomes during childhood and later in life. Long-term school failure contributes to truancy, inability to work productively as adults and greater risk of involvement with the correctional or juvenile justice system.

A complicating factor for children with co-occurring disorders is that they require coordination among several public service systems including schools, juvenile justice, child welfare, and general health for most successful outcomes. (See data box above.) Each of these child-serving systems has its own unique mandates and authority for protecting the well-being of children. This often results in confusion for

parents and for other departments in accessing services, as well as different atmospheres and expectations, and contradictory messages from system to system.

For services to be effective and cost efficient, they must be provided within a "System of Care" that unites all child-serving departments. The Surgeon General's report calls for action to be taken in the development of interagency systems of care which are comprehensive spectrums of mental health and other services and supports organized into a coordinated network to meet the diverse and changing needs of children with co-occurring disorders and their families. The common philosophy of child-centered, family focused and community-based permeates the entire process.

One primary goal of a System of Care is to increase clinical collaborations across settings, and to promote effective interventions by evaluating clinical strategies and outcomes. Over time, a System of Care results in: 1) service augmentation, 2) service substitution, and 3) service reconfiguration.

Access and services are *augmented*, that is there are increased numbers of children served and services offered. Restrictive services are *substituted* with community-based services to the extent that there are proportionately more community-based services relative to restrictive services. Community-based services are *reconfigured*, so that there are proportionately more services that support home-care. The 503 Project in St. Louis is an example of this type of System of Care in Missouri.

II Trend Analysis

The overall rate of out-of-home placement in Missouri's child welfare system has increased between 1992 and 1999. In 1992, the rate of entries into out-of-home placement was 4.2 per 1000 children and in 1999 the rate was 4.8 per 1000 children. This rate is not inclusive of children who are in out-of-home settings supervised by the Division of Youth Services (DYS), the Department of Mental Health (DMH) or the Juvenile/Family Court (JFC) system therefore the rate may be even greater.

At any given time during 2000, the Division of Family Services (DFS) had over 12,000 children in out-of-home placement. Children who have been victims of abuse, especially physical abuse, have been found to be at greater risk for experiencing serious emotional and behavioral problems. A conservative estimate indicates that approximately 2,000 of the 12,000 children have a serious emotional disturbance. It is felt that many of these children could benefit from an interagency approach to meeting their needs.

For fiscal year 2002, DMH in collaboration with DFS submitted a budget item for a joint treatment and permanency planning approach for children in residential placement. The budget item was to build upon the successes of the 503 Project in

St. Louis and position the state to address the provision of services in the least restrictive environment. This item was not funded.

III How Missouri Compares to Others

With regard to education, the following information was taken from the National Kids Count Data. While national data is not specific to children and youth with mental health problems, as was stated previously, 48% of students with SED drop out of grades 9 through 12.

TABLE 3.1

Nationwide versus Missouri Percentage of High School Dropouts
1990-1999 (ages 16-19)

National & State High School Dropout Percentages		
Year	**Nationwide**	**Missouri**
1990	10 %	10%
1999	10 %	7%

Source: National Kids Count Data.

Comparing Missouri to the national statistics regarding school attendance, and dropout rates must be made with caution due to the varying state statutory requirements and methods for gathering information. Comparing Missouri's out-of-home placement rate to national statistics is not available.

IV Factors Influencing the Measure

The field of children's mental health began to shift in the 1980's from institutional to community-based interventions. This shift was due to the realization that children and families were failing to receive adequate care from the public sector, whose services were fragmented, inadequate and over-reliant on institutional care. As a result, the emphasis of service delivery has shifted to systems of care that are designed to provide culturally competent, coordinated services; community-based services; new financing arrangements in the private and public sectors; family participation in decision making about care for their children; and individualized care drawing on treatment and social supports called wraparound services. Factors that influence this measure in Missouri and nationally include, 1) having adequate service capacity to meet treatment needs, and 2) having other child-serving systems especially school and juvenile courts comfortable with and supporting the use of community-based approaches.

V What Works

The 2000 Surgeon General's Report on Mental Health called for systems of care designed to provide the appropriate level of services for all children. It is children with co-occurring disorders, particularly children who are involved in multiple service sectors, who are likely to benefit the most from organized systems. Collectively, the results of the evaluations of systems of care suggest that they are effective in achieving important system improvements, such as reducing use of residential placements, and out-of-state placements and in achieving improvements in functional behavior. One such evaluation that provides evidence that systems of care are effective is the 1999 Annual Report to Congress On The Evaluation of the Comprehensive Community Mental Health Services for Children and Their Families Program. [A System of Care is a comprehensive array of mental health and other necessary services which are organized in a coordinated way to meet the multiple and changing needs of children, youth and their families.]

The report presents data accumulated through August 1999 from 22 grant communities initially funded in either FY 1993 or FY 1994 and from 9 grant communities first funded in FY 1997. Approximately 40,029 children and their families were served in systems of care during this time period. Some of the clinical outcomes as noted in this report include:

- Behavioral and Emotional Problems Were Reduced: After 2 years of receiving services, 42% of the children showed a significant reduction in severe behavioral and emotional symptoms as evidenced by a reduction in severe behavioral and emotional symptoms.
- Residential Stability Improved: Single residential living arrangements among children who remained in services 1 year made a 20% gain.
- Substance Abuse Diagnosis and Improvement in Functioning: Among communities funded in 1993 and 1994, about 17% of the children had a secondary diagnosis of substance abuse at entry into services. These children face greater challenges, yet made the greatest improvements in functioning after 1 year.

The report also indicates that community-based services are proving to be the most effective interventions for children with co-occurring disorders. Of these interventions, the most convincing evidence of effectiveness is for home-based services, case management and therapeutic foster care.

Local Systems of Care Teams

When a child or youth and their family are referred to the Local System of Care Team a commitment is made for unconditional care and commitment by the participating agencies. Although this may not guarantee access to an immediate service, the Local System of Care Team will remain committed to the development of a transition plan and supports until a long-term plan can be developed and the preferred services available. The Local System of Care Team, in developing and

authorizing a service plan for child or youth and the family, brings the full continuum of resources available to all of the partner agencies. These may be achieved by referrals to access additional services or removal of barriers in accessing services. When agencies make a referral to the Local System of Care Team, the funding that is committed to the youth prior to the referral will remain available to the child and family. The focus should initially be on what the youth and family need that is not available, and removal of the barriers for those needed supports and services. These may be service, funding, or policy barriers.

When providing services to children and families who are under the jurisdiction of the Missouri courts, the children and their families are subject to the courts' mandates. These mandates are issued in the interest of the community, child, and the family's safety. To this end, the Local System of Care Team will work in conjunction with the juvenile officer and court system to plan services that are in the best interest of the child and family.

The strength of the Local System of Care Team is not necessarily new funding or services but is in the provision of better coordination of services. This is accomplished through collaborative planning and the identification and removal of system barriers. Plans developed through the Local System of Care Team are individualized and specific. The referring agency and the Local System of Care Team remain actively involved in the provision and/or monitoring of services to the child or youth and the family even if the youth is referred for services outside the Team's geographic area.

Missouri has its own evidence of 'what works". From January 1992 to December 1993, DMH piloted the 503 Project in St. Louis, an interagency System of Care demonstration for children and youth with SED. This System of Care project was developed by:

- Missouri Department of Elementary and Secondary Education;
- Missouri Department of Mental Health;
- Missouri Department of Social Services;
- Missouri Juvenile Courts;
- Families; and
- Consumers.

The 503 Project was evaluated to assess both the effectiveness of services and the interagency system in serving children with SED at risk of out-of-home placement. An independent evaluation reported that:

- In terms of remaining with their family, there was improvement from 57% to an average of 75% during a year;
- In terms of regular school attendance there was improvement from 81% to 88% during the year; and
- An average of 85% of the children stayed in school during the year.

Additionally:

- Children's symptoms were reduced by 50%;
- There was overall functional improvement of 15%;
- Time in residential care was reduced by 72%; and
- 97% of families were satisfied or very satisfied.

The 503 Project was estimated to cost at least 25% less than treating children with more traditional services primarily inpatient and residential care. The interagency approach to service planning and delivery, interagency sharing of resources, involvement of families and use of services such as case management, wraparound, treatment (therapeutic) foster homes and respite were the foundation of the 503 Project's success.

VI Concerns

The availability of mental health services in relation to need is of grave concern. As reported in the Surgeon General's report, 70% of children in need of treatment do not receive mental health services and only one in five children with SED accessed mental health specialty services.

Research suggests that it is important to provide long-term services for children with co-occurring disorders through a continuum of community-based care that addresses needs and system barriers. The integration of services provided by agencies such as education, social services, health, mental health and juvenile justice is essential; each having a stake in the well being of children. However, integration of services requires systemic change, and services must be provided in a different fashion, i.e. community-based rather than reliance on out-of-home treatment. Unless such changes are made in the planning and intervention process with these children, the results will continue at great cost to the individual, family, and society.

It is critical that state child-serving departments work collaboratively to achieve effective and cost efficient outcomes. DMH has limited capacity to provide services. Therefore, in order to improve overall outcomes for children, capacity must grow. The state's ability to "bring up" additional Local Systems of Care to meet the needs of children with the most severe or complex mental health issues on a statewide basis will be hampered in the absence of additional resources.

DATA TABLE

TABLE 3.2

Missouri Graduation & Dropout Status of Students with Disabilities
Kindergarten - 22 Years of Age
1999-2000 School Year

Missouri Graduation & Dropout Status of All Students with Disabilities versus Students with Behavior Disorders			
Student Status	**Total # of Special Education Students**	**Percentage of Students Graduated**	**Percentage of Students Dropped Out**
All Special Education Students	127,225	53.09%	9.52%
Students with Behavior Disorders	9,505	24.76%	17.83%

Source: Missouri Department of Elementary & Secondary Education, Division of Special Education.

VII Description of Measure

The Child Behavior Check List will be used to measure the success of children with severe and/or multiple mental health problems living in their community served by System of Care Teams. Decreasing problem behaviors and increasing the social functioning and school competencies of a child will be evidence of their overall success.

The Child Behavior Check List is meant to be self-explanatory for parents with reading skills as low as the fifth grade level. Parents of children served in the Eastern Region System of Care will complete the instrument. Functionality will be measured by dividing the number of children served by the Eastern Region System of Care showing improved functioning in Child Behavior Check List scores to the number of children served in Eastern Region System of Care who have two Child Behavior Check List scores over time.

Initially, this measurement will be limited to the Eastern Region because a mature System of Care, the 503 Project, is operational in this part of the state. The Eastern Region will be trained in regards to the data collections instruments for System of Care. This year, the data collection instruments were revised and updated as needed. Baseline data collection will be complete by July 2002. A baseline score will be established upon conclusion of analysis.

As is noted in the proceeding Objective, System of Care Teams will be developed in the Central, Northwest, Southwest and Southeast regions. When these teams become fully operational, the same measurement will be applied to them.

KEY OBJECTIVE 3A: Increase the Percentage of Days in School for Children and Youth Served in the Eastern Region System of Care by 25% in FY 2003

- ❑ According to the 2000 Missouri Kids Count Data, in 1999, in St. Louis City, over 13% of students dropped out of school. The county graduation rate was 38. 8%.

I Why This Measure is Important

St. Louis City's dropout rate is one of the highest in the state and likewise the county's graduation rate is one of the lowest. As was stated previously, students with co-occurring disorders miss more days of school per year than do students in any other disability category, as well as having one of the highest dropout rates.

Teens who drop out of high school will find it difficult to achieve financial success in life. The most recent data available from the Census Bureau's Survey of Income and Program Participation suggest that high school dropouts are about three times as likely to slip into poverty from one year to the next as those who have finished high school. A recent report from the U.S. Department of Education concludes, "In terms of employment, earnings, and family formation, dropouts from high school face difficulties in making the transition to the adult world".

High school dropouts make up nearly half of the heads of households receiving public assistance in Missouri, according to the 2000 Missouri Kids Count Data Report. Between 1973-1997, the average hourly wage for high school dropouts decreased 31% when adjusted for inflation. Economic prospects for dropouts will be even more gloomily as more and more jobs require advanced skills and technical knowledge.

High school dropouts are at risk for other negative outcomes like becoming a teen parent or spending time in prison. The children of dropouts are much less likely to graduate themselves, perpetuating a cycle of diminished opportunities. One-third of these children must repeat a grade. They also require special services and are suspended or expelled more frequently.

The Eastern region has developed a results-based System of Care, the 503 Project that has demonstrated the ability to improve regular school attendance of children with co-occurring disorders, served by DMH. As described in the Key Outcome for this objective, the 503 Project was designed as a community based, locally

controlled, interagency treatment program whose goal was to keep children with multiple mental health needs at home, in school and out of jail.

State agencies involved with this initiative include mental health, social services, and elementary and secondary education. The model was developed with emphasis on intensive case management and respite, as well as a focus on family choice and wraparound treatment planning. While the 503 Project is successful, the number of children currently served is limited compared to the number of children that are in need of this comprehensive approach. This is primarily due to the limited funding available to develop these resources.

II Trend Analysis

The 503 Project Performance and Evaluation Report found that 86% of the children served in the program were in school during the year.

According to the 2000 National Kids Count Report, there was a small decline in the share of 16 to 19 year olds not attending school and not working, from 10% in 1990 to 9% in 1997.

III How Missouri Compares to Others

The following table helps to illustrate how Missouri compares to other states regarding school drop out rates for children with emotional disturbances.

Comparison across states regarding measures of school functioning and attendance must be made with caution. States have different statutory mandates, rules and methods for collecting and reporting. Cross state comparisons often reflect comparison of apples and oranges unless all data elements that are reported are understood and consistently defined. This process of being able to effectively analyze data across states will be a focus for continued analysis.

TABLE 3.3

Dropout Status of Special Education Students with Emotional Disturbances*
Ages 14-21 & Older
1998-1999 School Year

State	Percentage of Special Education Students with Emotional Disturbances who Dropped Out of School
Arkansas	11.38%
Illinois	10.65%
Missouri	9.79%
Iowa	9.55%
Oklahoma	9.05%
Kansas	8.18%
U.S. & Outlying Areas	7.80%

Source: U.S. Department of Education, Office of Special Education Programs.

** Based on Total Number of Students Served Under IDEA*

The Federal special education law, the Individuals with Disabilities Education Act (IDEA), mandates school systems to provide special education services to children and adolescents whose disabilities interfere with their education. When these disabilities take the form of serious emotional or behavioral disturbances, school systems are required to respond through assessment, counseling, behavior management and special classes or schools. Under a System of Care model, education is but one of the agencies that is working collaboratively to keep these children and youth in school, and safely residing in their homes or home-like setting. No one agency carries the sole responsibility for accomplishing this goal. The 503 Project is an example of a System of Care that is improving school outcomes for children. Increasing SOC teams will help to ensure that more children are staying in school and graduating.

IV Factors Influencing the Measure

Dropout rates vary by location, race and ethnicity according to the 2000 National Kids Count Data Report. Cooperative agreements and services between local schools and the local community mental health centers must be in effect to achieve the outcome of children remaining in school. Unfortunately, there are times when child-serving agencies are not as fully committed as need be to this common goal. In the 503 Project, the St. Louis Special School District was a regular player and was critical to achieving the 503 Project outcomes regarding school.

V What Works

The 503 Project Performance and Evaluation Report supports the System of Care model for improving school attendance for children with co-occurring disorders. This report indicates that the 503 Project was able to maintain a relatively high level of school involvement among the children served. Relatively few children attended school less than half the time, i.e. an average of less than 4% of the group during the twelve-month period. The majority of the children were in special education classes.

The school based results that occurred in the 503 Project, are consistent with outcomes experienced in other systems of care. The Annual Report to Congress On The Evaluation of the Comprehensive Community Mental Health Services for Children and Their Families Program reported the following:

- The percentage of children attending school regularly increased from 85% at entry into system of care services to 89.4% after 1 year of services
- Grades that were average or above average made a 20% gain among children remaining in services up to 1 year. Children in special education programs also showed improvement in their grades. Average or above average grades improved by 14% over those at intake.

VI Concerns

In order to help ensure that children stay in school and graduate, it is vital that child-serving agencies work as partners towards fulfilling this goal. There must be a willingness of all interagency partners and families to commit to community-based services and to shared service development and implementation. Service capacity development must occur for this initiative to be effective for all Missouri's children.

In addition, fulfilling this goal will require the ability to adequately support parents and teachers, the cornerstone players in children's day-to-day school education and activities.

VII Description of Measure

Children and youth served in the Eastern Region System of Care will increase the percentage of days they attend school in the community. This will be measured by comparing the number of actual days that children/youth in the System of Care spend in school to the number of possible days that could be spent in school, for the year. This data will be collected by the community mental health centers from each individual school and entered into a centralized database.

The Department believes that functional system of care teams will increase the percentage of days children are in school in the Eastern Region by 25% in FY 2003.

Within the first year's data collection process, issues have arisen that have made it difficult to collect the school information including the following:

- Information has to be collected for each child from their respective school. What is required by one school to obtain the information may not be the same requirements as required by another. As a result, protocols have to be put in place with individual schools for collection purposes.
- Case managers have to "continually" track the child's school attendance. and report monthly to ensure accuracy of data.
- Prior to System of Care implementation, CPS did not routinely collect data on the number of days a child spent in school so a baseline could not be established for comparison.

VIII Key Strategies

A. Expand capacity of System of Care Teams (503 Project) to entire Eastern Region.

B. Develop cooperative agreements for System of Care Teams in the Eastern Region; agreements are to define roles and responsibilities for schools and the treating/support systems to work collaboratively to serve children and youth referred to the System of Care Team.

C. Expand capacity for day programs for children and youth in partnership with schools in the Eastern Region.

D. Expand capacity for case management and crisis services to be implemented within the setting where the child lives and within the schools. In February, 2002 a new Purchase of Service definition was created for consultation to schools. This service covers consultation, training and education for school administrators, teachers, guidance counselors, and other school personnel, parents and students regarding mental health issues.

E. Develop after school mentoring and tutoring programs.

F. Expand capacity for family supports to focus on the family supporting the child/youth in school.

G. Seek additional funding to support service expansion across the state.

H. Training will be provided to Eastern region personnel in order to enhance the data collection for this objective.

I. In addition, Regional oversight will occur to ensure data collection.

J. The Department's three divisions, Mental Retardation and Developmental Disabilities, Comprehensive Psychiatric Services and Alcohol and Drug Abuse,

have each given priority status to children and youth identified by the local System of Care Teams.

KEY OBJECTIVE 3B: Increase the Percentage of Days that Children in State Custody & Served By the Eastern Region System of Care Live in Their Own Homes or Homelike Settings by 30% in FY 2003

Effectiveness and Outcome Research on Residential Services

- ❑ According to the Surgeon General's report, residential treatment centers are the second most restrictive form of care (next to inpatient hospitalization) for children with severe mental disorders. Although used by a relatively small percentage (8%) of treated children, nearly one-fourth of the national outlay on child mental health is spent on care in these settings. However, there is only weak evidence for their effectiveness.

- ❑ Friedman (1990) cited two studies revealing no significant benefits resulting from residential treatment when compared to alternative methods.

Source: Components of a System of Care: What does the research say? Surgeon General's Report.

I Why This Measure is Important

A number of scholarly reviews of the existing literature on the efficacy and outcomes of hospitalization and residential treatment have been completed. Burns and Friedman (1990) cited one clinical trial comparing the behavioral and educational outcomes of a group of children randomly assigned to hospitalization and community-based treatment services. Results revealed that outcomes at discharge were comparable for both groups. However, at follow-up, one half of the hospitalized group and only one-fourth of the community-based group were in institutions.

Community-based services include case management, home-based services, therapeutic foster care, and crisis services. There is mounting evidence of the benefits and effectiveness of these interventions in diverting out-of-home placement. All of these services are included in the Eastern region System of Care.

II Trend Analysis

In the last 20 years, there has been a trend within child mental health and child welfare to move the children's service system from out-of-home placement interventions to community-based services. In Missouri, DMH has held residential care capacity steady while community-based services have grown. This reflects DMH's commitment to community-based care as a first and best option for children and youth. DMH has found that residential services meet the need for a distinct,

limited number of children, but this should not be the treatment of choice for all severe need children.

The Division of Family Services had more than 2,200 children placed in residential care in FY 2000. DMH and DFS agreed that many of these children could benefit from an interagency approach to meeting their needs. For this reason, for fiscal year 2002, DMH in collaboration with DFS submitted a budget item for a joint treatment and permanency planning approach for children in residential care. This item was not funded.

III How Missouri Compares to Others

Over the last ten years, DMH has intentionally and purposefully worked to develop an integrated, community-based System of Care. This is evidenced by efforts to increase case management services, Treatment Family Homes, Families First, Consumer and Family Directed Supports, and the Community Prevention Program. While emphasis has been placed on the development of community-based services, capacity continues to lag behind the need for services. This dilemma is not unique to Missouri, but rather, is the status quo in most other states as well.

As with analysis of data regarding educational placements and progress, cross state data regarding use of out of home care must be carefully analyzed. States have different statutes, rules and methods to report data. Ongoing analysis will lead to further understanding regarding where Missouri stands in comparison with other states.

IV Factors Influencing the Measure

New funding options through Medicaid's Early Periodic Screening Diagnosis and Treatment, Intensive Targeted Case Management, and Community Psychiatric Rehabilitative Services have supported the development of more community-based service options. Despite this growth in funding, the children's mental health system continues to experience gaps in community-based services, as well as limited access to these services across the state. No one area of the state has adequate capacity for community-based services.

V What Works

The 503 Project in St. Louis has demonstrated success in preventing out-of-home placement of children and youth, and thus maintaining children in their home or homelike setting. According to the 503 Project Performance and Evaluation Report, over time, the proportion of time children spent living at home increased, reaching a peak in the fourth month, with 86% of the time spent living at home.

What is most impressive about the program is its ability to keep children in the family or within the natural system of their relatives and friends. The use of residential and institutional facilities is kept to a low level.

VI Concerns

There are many factors beyond mental health services that may impact the overall out-of-home placement rate for children and youth. Some children as a result of safety and treatment needs require out-of-home care, thus such care is the least restrictive environment for them at that given time. In order to determine the most appropriate level of care for each child, agencies and state departments must work together with the child's family. This endeavor will help to ensure that if children are placed out-of-home, it is based on clinical need, as opposed to the system lacking the capacity for available alternatives.

VII Description of Measure

There will be an increase in the percentage of days that children in state custody and served by the Eastern region System of Care live in their own homes or homelike settings. This will be measured by comparing the number of days children/youth in state custody live in their own homes or homelike settings to the number of days children/youth are in out of home settings. Providers will collect this information and it will be entered into a centralized database.

The Department believes that a functional system of care teams will increase the percentage of days children live in their own homes or homelike settings in the Eastern Region by 30% in FY 2003. Data show that of the 51 children in state custody served by CPS administrative agents in FY 2001, 76.5% were placed out their own or a homelike setting

VIII Key Strategies

A. Develop System of Care Teams throughout Eastern Region.

B. Develop cooperative agreements for Teams defining roles and responsibilities related to developing and funding home and community-based treatment options. The Department will make final revisions to the DFS/CPS Administrative Agent Level IV Plus Partnership within the next two months. Level IV Plus refers to children in the custody of DFS whose severe behavioral needs requires the most restrictive residential care.

C. Expand capacity for treatment (therapeutic) family/career foster homes.

D. Develop capacity for independent living with appropriate supports and services for older youth.

E. Expand family supports, case management and respite care capacities

F. See additional funding to expand service capacity across the state.

G. See applicable strategies listed under Objective 3A.

KEY OBJECTIVE 3C: Increase Access to System of Care Teams for Children & Youth Served by Multiple State Departments by Establishing 5 Additional Teams in Other Areas of the State by FY 2003

System of Care

- A System of Care is a comprehensive array of mental health and other necessary services which are organized in a coordinated way to meet the multiple and changing needs of children, youth and their families. However, a System of Care is more than an array of services, it is a philosophy about the way in which children, youth and families receive services. Partnerships at all levels between families, providers, communities, regions and the state are fundamental to an effective System of Care.

Source: Department of Mental Health's System of Care for Children, Youth & Families.

I Why This Measure is Important

Within the public mental health system, the 1980's and 1990's have seen an increased emphasis on developing interagency community-based systems of care. As noted in the Surgeon General's Report while systems of care are designed to provide the appropriate level of services for all children, it is children with co-occurring disorders involved in multiple service sectors that are likely to benefit the most.

The report goes on to state that several studies on the effectiveness of systems of care have been conducted in recent years. Although findings are encouraging, their effectiveness has not yet been demonstrated conclusively, largely because evaluation studies have not had a control group. Most evaluations indicate that systems of care reduce rates of re-institutionalization after discharge from residential settings, reduce out-of-state placements of children, and improve other individual outcomes such as number of behavior problems and satisfaction with services.

The System of Care has helped to redefine the role of families as one of partner in services. Family participation has improved the process of delivering services and their outcomes. Research has found that for children with co-occurring disorders the more the family participates in planning services, the better family members feel their children's needs are met.

II Trend Analysis

As reported previously, nationally, emphasis has shifted to the development of systems of care that are designed to provide culturally competent, coordinated

services, community-based services, new financing arrangements, family participation in decision making about care for their children, and individualized care drawing on treatment and social supports called wraparound services.

III How Missouri Compares to Others

For more than ten years, DMH, its advocates, family advocates and providers have worked together to develop local systems of care. These efforts have often taken different forms but are based on the process of interagency staffing and collaboration and adhere to a common philosophy of services being child-centered, family-focused and community-based. DMH is in the process of building upon and expanding these current efforts. Missouri's evidenced-based model for System of Care, entitled the 503 Project, will be developed in the Central, Northwest, Southwest and Southeast regions. There are no national measurements of how other states are progressing in development of systems of care. DMH will continue to work with national partners to determine methods for comparison of this objective.

IV Factors Influencing the Measure

A number of factors will influence this objective including:

- Receiving the Governor's Office and Legislative support for DMH having lead responsibility for development of a System of Care for children, youth and families;
- Department directors ensuring that state child-serving Divisions recognize and utilize DMH as the lead on System of Care for children;
- Department Directors ensuring that the state child-serving Divisions share available, appropriate resources to support the System of Care services; and
- DMH receiving appropriate funding to establish a comprehensive System of Care for children who have psychiatric, developmental and substance abuse service needs.

V What Works

The multiple problems associated with co-occurring disorders in children and adolescents are best addressed with a "systems" approach in which multiple service sectors work in an organized, collaborative way. Research on the effectiveness of systems of care shows positive results for system outcomes and functional outcomes for children.

Based on the 503 Project Performance and Evaluation, the 503 System of Care has proven cost effective for treating children with multiple needs.

- Estimated cost of Alternative Treatment: $290, 845.00
- Estimated Actual Cost of 503 Project Treatment: $218,376.00

Even given the conservative estimates for alternative treatment costs, it appears that the 503 Project costs 25% less than the previous alternatives would have cost.

VI Concerns

One of the primary concerns is the ability of DMH to obtain the necessary funding to establish a System of Care. While DMH has already laid the foundation for a System of Care, funding will be necessary to ensure statewide capacity and access.

Another concern is the commitment of all child-serving agencies to work collaboratively. Cooperation and a common vision are vital for the success of a System of Care.

VII Description of Measure

There will be increased access to the number of System of Care Teams for children and youth served by multiple state departments. This will be measured by comparing the number of new Systems of Care Teams to the number of System of Care Teams already in existence.

The Department as set a targeted goals of establishing five additional System of Care Teams areas of the State other than the Eastern Region by FY 2003.

VIII Key Strategies

A. Develop guidelines for development of Systems of Care to be used for statewide development. [Update] *The System of Care For Children Youth and Families* document has been revised and distributed. In addition, the following documents have been developed and distributed:
    1. Coordinated Screening and Assessment Across Department of Mental Health Divisions
    2. Protocol for Coordinated Service Planning For Children With Co-Occurring Disorders
    3. Responding to Court Orders Through Juvenile/Family Court

B. [Update] Five counties were identified as system of care kick-off sites. The identification of the sites was an interagency effort by the State System of Care Team.

C. Develop and implement training and technical assistance plan for Local and State System of Care Teams. [Update] System of care training sessions have been held with middle managers within the Department of Mental Health. In addition, system of care kick-off meetings have been held in five different locations around the State. Attendees at these trainings included Division of Family Services (DFS), Division of Youth Services (DYS), Office of State Court

Administrators (OSCA), and Department of Elementary and Secondary Education (DESE).

D. Develop an Interagency State System of Care Team to provide oversight, coordination and technical assistance to local teams. [Update] This Team has been established and has regular monthly meetings. Representatives include personnel from DFS, DYS, OSCA, DESE, and all three Divisions within DMH.

E. Seek additional funding to expand service capacity for services such as case management, crisis intervention, in-school programs and supports, respite and family support.

F. Develop interagency funding plan for System of Care. The Department of Mental Health has submitted a Cooperative Agreement application to the Center For Mental Health Services to develop a system of care in the Southwest part of the State.

G. Develop statewide monitoring and evaluation plan for System of Care.

H. The Department of Mental Health is updating and revising the measurement tools for system of care.

H. The Department of Mental Health will finalize the DFS/CPS Administrative Agent Level IV Plus Partnership

KEY OUTCOME 4: Improved Quality of Life for Department of Mental Health Consumers Living in the Community

I Why This Measure is Important

Through the continued efforts of many persons over the last 30 years, we can now say that most of the people with mental illness or developmental disabilities live in and are members of their community. The days of large numbers of persons living in large institutions, isolated from their families and from mainstream living, are long since past. The challenge of today, however, is insuring that the quality of life is effectively maintained for mental health consumers living in the community.

There are a large number of factors that contribute to one's quality of life. For persons with severe mental illness or developmental disabilities attempting to live in the community, these factors will include a person's sense of wellbeing and safety; the availability of opportunities for meaningful and contributory activities; and support for the goals of self determination and/or recovery.

A key issue of concern for consumers residing in the community is the availability and employment of consistent and competent caregivers. An economy that currently offers a wide range of employment opportunities other than human services work, is posing some major obstacles to fulfilling this quality of care requirement and poses a threat to consumer safety and wellbeing. Community providers throughout the State consistently report staff turnover rates of frightening proportions. These staff turnover problems quickly erode the best efforts of employers to keep staff trained and to insure that therapeutic consumer-staff relationships are established and maintained.

A vitally important goal for the vast majority of mental health consumers living in the community is the ability to work and contribute. In a society that values work as ours does, employment provides opportunities for community integration that are significant in terms of their quality of life. For this population, however, it is important to recognize that work experiences may need to be adapted and tailored to meet individual needs to assure that essential benefits are not threatened and to accommodate the individual's functional abilities and limitations. Significant planning, collaboration, and effort is needed to develop additional work opportunities and to accommodate the need for a full range of such opportunities to include part-time as well as full-time work, sheltered and supported work as well as competitive employment, and skill-building through volunteerism and training activities as preparatory to work experiences.

Another strategic consideration for the Department of Mental Health is promotion of awareness that psychiatric treatment works and that individuals with mental illness can reclaim their lives. Recovery as a concept is a critical philosophical underpinning to a service delivery system that promotes active involvement and self-determination of its consumers. The ability to measure and demonstrate the effectiveness of treatment and the critical role that involved consumers can have in shaping their own recovery is important as consumers define the values and practices that help them to succeed and thrive beyond the limitations that may be a part of their illness.

Although it would be desirable to measure quality of the consumer's life as an outcome measure, the technology to do so in a meaningful way remains elusive. As social scientists continue to explore technologies, there is currently no accepted standard for measuring quality of life. Therefore, DMH must utilize other measurable indicators that may correlate with quality of life. Currently, the Department defines and measures Quality of Life as a subjective measure of the individual's perception of his or her own life circumstances. The tool used to measure the consumer's perception is the annual DMH satisfaction survey.

Quality improvement and quality development technologies challenge an organization to review and revise these measures over time to reflect current challenges or improvement strategies, replacing existing measures with new ones as needed in response to a dynamic health care environment and the accountability mandates associated with specialized health care delivery.

II Trend Analysis

Quality is a complex concept with many factors influencing individual judgments about the service received, particularly in the health care sector. In addressing quality of life as a strategic planning outcome, the key features DMH proposes to track and analyze are:

- Consumer satisfaction;
- Quality of inputs (number of staff, experience of staff, and continuity of care-giving relationships between consumers/staff, average DMH dollars spent per consumer per day) [see Objective 4A]; and
- Quality of outputs such as vocational status measures and trends, treatment effectiveness, and functional outcomes that reflect meaningful outcomes for consumers [see Objectives 4B and 4C].

Consumer Satisfaction

Consumer satisfaction is a well-accepted tool for measuring health care performance when used in conjunction with other performance indicators. DMH has been conducting consumer satisfaction surveys since 1998. Over time, the content

and scope of the surveys have expanded to provide better and more complete information for DMH's use in identifying quality improvement targets and goals.

The method of conducting the satisfaction survey has been adapted to each of the populations served by DMH. Interviewing is the primary survey method for individuals served by the Division of Mental Retardation and Developmental Disabilities (MRDD) while consumers served by the Divisions of Comprehensive Psychiatric Services (CPS) and Alcohol and Drug Abuse (ADA) received written surveys to be returned by mail. Costs of conducting the survey and analysis have limited the dissemination of the survey. However, each year the survey has been expanded to include additional consumers. In April 2002, the survey was expanded to include residents of community residential facilities whose care is financially subsidized by CPS. In addition, the MRDD process was modified to include an identifier to allow DMH to separately sort and analyze data for individuals living in community residential settings. By developing specific survey questions and identifying those in community residential settings, DMH will utilize the expanded survey to establish baseline consumer satisfaction measures in 2002 for DMH consumers living in the community. Analysis activities are expected to be complete in the fall of 2002 and will be used to establish baseline for future DMH strategic planning and evaluation for Outcome 4.

Caregivers

Challenges in recruitment and retention of staff in the public mental health field have increased as our nation has experienced full employment in recent years. A presentation at the Second National Summit of State Psychiatric Hospitals in March, 2001, cited the following issues related to direct care workers:

- Wages are close to the federal poverty level;
- Entry level wages are higher for 57% of competing occupations;
- 74% of competing occupations for community residential care positions are more likely to receive benefit packages;
- Competing occupations offer more advancement opportunities;
- Caregivers in mental health settings require more education and training as well as more thorough background screening and greater likelihood of disqualification than that required in other settings; and
- Caregivers have a higher incidence of injury and require a greater level of physical strength and stamina due to job performance requirements.

Employment

Most employment data is designed to reflect the economic status of a locale rather than the individual success of a population. However, federal programs like the Ticket to Work program and the President's New Freedom Initiative may result in measurement protocols that identify common definitions and outcome measures for employment of individuals with disabilities. The DMH will use Missouri's Division of

Employment Security as the data source for this objective and will match the data with records of DMH service provision to generate specific outcome measures.

Recovery

Recovery is a fairly recent concept in the treatment of persons with severe and persistent mental illness and currently represents a more philosophical construct that has yet to be defined in measurable terms. No national standards exist and statewide data on functional status and trends collected by the Division of CPS provide the best "proxies" to reflect achievement in this area.

III How Missouri Compares to Others

It is difficult to assess comparisons of consumer satisfaction levels in Missouri in relationship to other public mental health service delivery systems. Although "report cards" for services were discussed extensively as part of the national policy debate regarding managed health care, no standards exist to assure comparability of data and there is limited access to such data for other states.

Although the literature contains multiple references to consumer satisfaction data related to health care services in general, these studies and statistics have not proven helpful as benchmarks or sources for comparison to data collected on consumers of public mental health services.

IV Factors Influencing the Measure

As cited earlier, quality of life is a complex, multi-factorial concept that is influenced by many factors. Although DMH will focus on critical factors such as consumer satisfaction, staffing as a quality of care input, and functional status measures as outputs, there are many additional factors that also influence quality of life.

Economic Performance and Trends

If the unemployment rate increases, there could be improved rates of recruitment and retention among mental health caregivers. However, the gains might not be proportionate to that associated with the economic improvement if DMH fails to implement recruitment and retention strategies. In addition, as rates of unemployment increase, opportunities for individuals with disabilities to be employed are likely to decrease.

Consumer Partnership in Service Delivery System Planning and Policy Formulation

The field of mental health has learned that partnerships and feedback from consumers and families is critical in shaping the service delivery system. The contributions of consumers and their families regarding quality of care and methods

to manage quality is crucial to support self-determination and recovery lifestyles for those served by DMH.

Recognition and Value of Contribution by Mental Health Workers

Many aspects of job satisfaction are tied to the intrinsic value of the contribution individuals feel they are making to the organization or society as a whole. The more effective efforts in public awareness can be in decreasing stigma for individuals with mental illness, developmental disabilities, and substance abuse, the more "status" that can be associated with employment in the field of mental health.

Consumers' Level of Need and Service Demand

As resources have been constrained or limited, DMH has increasingly limited access to those individuals with the greatest service needs. Consequently, over the last decade, individuals receiving services have higher levels of symptom acuity, more behavioral issues, greater functional impairments, and often have higher incidence of physical health care needs, many of a chronic nature. The result is increasing demands and expectations as the level of risk and responsibility for these individuals grows. In association, increased standards of service delivery practices have occurred in areas such as restraint and seclusion, individualized planning, and consumer rights. At the same time, many of the individuals served by DMH also have one or more chronic health care needs such as Chronic Obstructive Pulmonary Disease (COPD), sleep apnea, Hepatitis B, HIV/AIDS, and diabetes have added to work load for staff in community residential facilities.

New Technologies

The field of mental health, like all health care, can be dramatically impacted by advances in technology that result in improved outcomes for consumers. These can include medical breakthroughs in newer seizure and psychotropic medications as well as implementation of evidence-based best practices such as supported employment, assertive community treatment, and integrated services for co-occurring mental illness and substance abuse. Although these developments have been incremental and have not yet achieved a "cure" for mental illness, developmental disorders, or substance abuse, these innovative practices hold promise for improved outcomes for consumers and can have impact on staffing patterns.

Funding Uncertainties

The 2002 legislative session was unprecedented in terms of budget challenges. The uncertainties associated with funding for community mental health programs in the Rainy Day fund resulted in challenges for community providers. Anecdotal information suggests that recruitment and retention rates during this time may have been negatively impacted as individuals sought more secure employment settings.

If similar uncertainties are exhibited in future budget cycles, the effect on recruitment and retention may be more lasting.

V What Works

The most significant actions that can be taken in improving the quality of life for our consumers regardless of where they reside, are to first listen carefully to what they are telling us, and then involve them directly in developing and implementing more effective treatment and support services. Our consumers are the best sources for information on the nature and quality of life they are experiencing and how those experiences can be improved.

- Through annual consumer surveys and consumer participation on a variety of DMH service advisory bodies, we provide and should continue to provide vehicles to hear and respond to the consumer recommendations for improving the overall quality of their lives. Consumer involvement and direction in designing their individual plans for supports and services impact the personal achievement of quality of life.
- Provision of consistent and trained direct care providers will solidify and insure the benefits of a therapeutic consumer-staff relationship. Efforts to reduce turnover in these critical staff positions will improve the safety and wellbeing of consumers in their care.
- Meaningful, contributory activity or employment based on the individual's needs and preferences must be made available and supported through efforts and partnerships with such entities as Social Security, Vocational Rehabilitation and other educational and vocational institutions
- Aggregate and individual progress towards recovery and self-determination must be measured and used as the basis of critical treatment and support services decision making.

VI Concerns

There are a number of complicating issues in strategic planning and implementation related to qualify of life for consumers in community residential settings. These include, but are not limited to:

- Ongoing challenge to measure quality indicators that are meaningful to consumers;
- Limited technologies for measurement of quality outcomes rather than process measures;
- Data integrity issues as reflected by reporting rates and accuracy of data;
- Many of the identified measures are impacted by numerous other factors out of the control of the Department such as general economic conditions;
- Early phase of development in this effort and need to establish baseline measures;

- Transition from current DMH information system to a new system over the next few years;
- Adequate resources to complete data analysis and implement strategies; and
- Health Insurance Portability and Accountability Act of 1996 (HIPAA) requirements related to managing and utilizing consumer data.

VII Description of Measure

Although DMH has measured quality of life each year of the Consumer Satisfaction Survey since 1998, the results of the all of the questions in this section have not been combined to form a single measure of consumer perception of quality of life. The measure will include CPRC consumers; CPS and MRDD consumers in supported community living placements in residential care facilities; other CPS community service consumers; MRDD Regional Center Consumers; and ADA consumers. The measure will be produced and monitored on an annual basis.

Quality of Life: The percentage of consumers living in the community who report that they are satisfied with their quality of life as reflected on the annual DMH satisfaction survey each fiscal year.

Numerator: Number of consumers living in the community who report that they are satisfied with their quality of life as reflected on the annual DMH satisfaction survey each fiscal year.

Denominator: Number of consumers living in the community who complete a DMH satisfaction survey.

Developing baselines and trending will require some modification and refinement of the data over time to generate meaningful information.

Description of specific measurements for the staff turnover, employment and recovery objectives for this outcome are included in the narrative for each of the respective objectives.

These measures are impacted annually by many factors not in control of the Department or state operations, including socio-economic standing, prevailing economic conditions and local community quality of life.

KEY OBJECTIVE 4a: Reduce Staff Turnover in Community Residential Facilities by 15% by 2006

I Why This Measure is Important

The primary resource in delivery of mental health care is its workforce. Whether supporting individuals with developmental disabilities or providing specific services to individuals requiring psychiatric supports, the human service worker is the core element in the continual development of rehabilitation, self-determination, recovery and personal independence. These interventions are relationship-based and rely on respectful and knowledgeable interactions that provide motivation and hope for consumers. Studies have shown that a primary contributor to positive long-term outcomes for consumers are highly trained staff who have knowledge of a consumer's needs and have developed a positive relationship in their lives.

A stable and highly trained human service workforce is vital in the delivery of quality health care for consumers of mental health services and supports. Whether the individual is receiving family support, living in community residential settings, or being supported by one of our DMH facilities, meeting the need for "frontline" caregivers is the first step in providing a quality chain of health care. Studies have demonstrated that individuals with serious mental illness and developmental disabilities have reduced life expectancies. One such study specific to persons with developmental disabilities identifies one factor in this reduction to the lack of consistent and highly trained human services workers who can identify consumer health needs and seek medical care when needed.

In the field of developmental disabilities, mental illness, and substance abuse disorders there is increasing placement of individuals into our communities. This rise in community and family based services and supports has increased the need for highly trained direct care and support workers that can handle the medical, behavioral, and social needs of our consumers in a variety of settings. With the rise of community supports, an increased number of individuals with challenging life issues can live successfully in the community. It should be noted, however, that habilitation centers and psychiatric facilities require even more intensive staffing numbers as they care for individuals who cannot function in the community due to severe behavioral and medical concerns. These increasing demands for caregivers, the challenges that caring for persons with disabilities present, the highly competitive labor market, and an overall decline in available workforce in Missouri and surrounding states, has caused annual turnover rates among direct care workers in excess of 50%. This is true of state run facilities as well as the private, community service provider agencies.

Staff turnover provides a useful measure of the ability to maintain an experienced workforce that not only is trained and competent in health and mental health related matters but also contributes to the continuity and quality of care for consumers. The positive outcome for consumers from turnover reduction is a knowledgeable staff that provides the supports and stable relationships that are critical for safe and successful inclusion of persons with disabilities in society.

In FY 2000, CPS served 5,698 individuals in supervised residential settings across the state, many of whom lived in residential care facilities. For the same period, MRDD served 5,483 people requiring a variety of direct and indirect supports. Individuals served by MRDD include consumers who live in the community and require various amounts of paid direct care support. As we face the challenges of meeting the highly individualized and comprehensive needs of these consumers, the demand for a highly trained, competent workforce with low turnover rates will specifically affect the lives of these citizens.

II Trend Analysis

Challenges in recruitment and retention of staff in adult caregiver positions have reached crisis proportions in recent years. National trends have shown this problem is affecting the service support system through the United States. Although it is not unique to the field of mental health, it has devastating implications due to the vulnerable nature of the consumers served in our congregate settings as well as community residential facilities. Specific trends that define this crisis include:

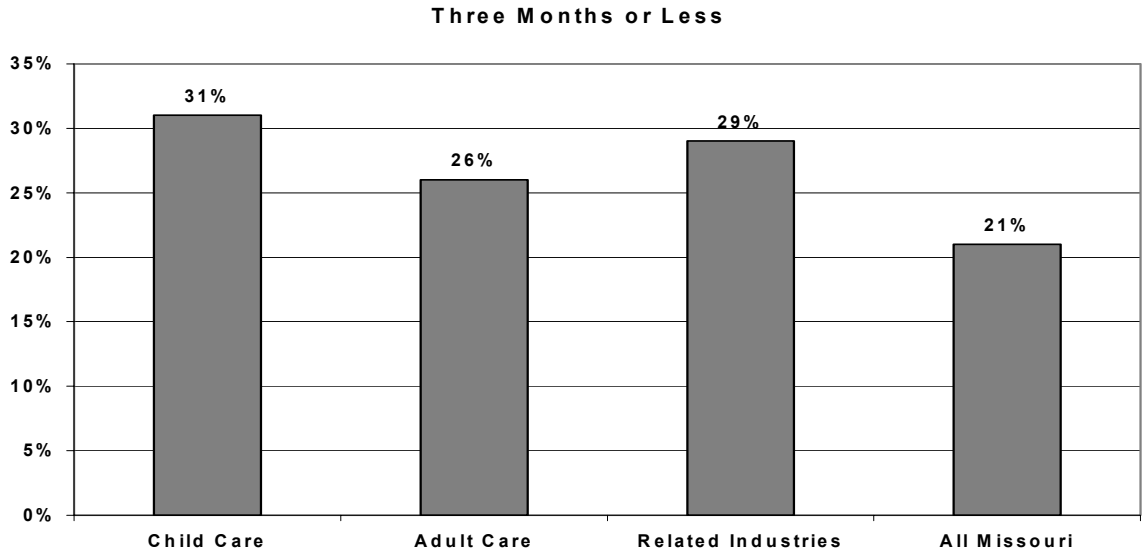
- Nationally the Bureau of Labor Statistics (Leftwich, 1994) estimates that by the year 2005 the number of:
  - Home health aides needed will increase by 138% to 827,000;
  - Human service workers needed will increase 136% to 445,000; and;
  - Personal and home care aides needed will increase 130% to 293,000.
- The proportion of staff that historically make up the direct support workforce (men and women between 18 to 44) is projected to drop from 42% to 37% between 1995 to 2005, and it will continue to drop even beyond 2005 (U.S. Bureau of the Census, 1996).
- Twenty-two percent (22%) of direct care worker families are living at or below poverty, nearly three times the rate for all workers. Adult caregivers in Missouri earn 20% less than the average Missourian, despite working more hours (University of Missouri, Dept. of Economics, 2000).
- Direct care aides earn $6.97 per hour compared to related industry rates of $9.24 and a Missouri average of $7.97, as reported in 2000 by the MO Governor's Caregivers Workforce Taskforce and the University of Missouri, Dept. of Economics.
- There are approximately 305,000 paid full-time equivalent direct support positions in institutional and community residential settings for people with

developmental disabilities in the United States. Nationally, in 1992 direct support workers earned an average wage of $5.97 per hour in private residential settings and $8.56 in public residential settings. (Braddock and Mitchell, 1992). Even though there is a national commitment to keeping people in the community, unequal pay practices do not support this effort.

- A recent survey conducted by the Department of Mental Health of its residential care providers reflected pay ranges of $5.15 to $12.50 per hour, with a mean of $7.85. 10% of these providers reflected salaries for direct care workers under $6.00 per hour.
- The complexity and dedication required of direct care positions are viewed as less attractive and desirable in terms of functions and conditions when compared with positions in other service industries. This situation is made worse by lower rates of compensation.
- Caregiver industry growth rate is projected to be one of the highest growth rates in Missouri with projected increases of 4.48% between 1996 and 2006. For every 10 newly created jobs in the United States, 8 are projected to be service oriented.
- The aging of our society is going to change the human support workforce in the future. In 1990 there were 41 million people 60 and older in the U.S. By 2006 people 60 and over will make up the largest component of the population. By 2030 the population of persons 60 and older is expected to increase to almost 90 million. The demands this population will put on the support system in the areas of daily support and health care will further erode the potential pool of support workers needed for person with disabilities and psychiatric needs.
- Nationally, the cost to replace staff who turnover in the direct support field is as high as $206 million dollars (Larson & Lakin, 1992).

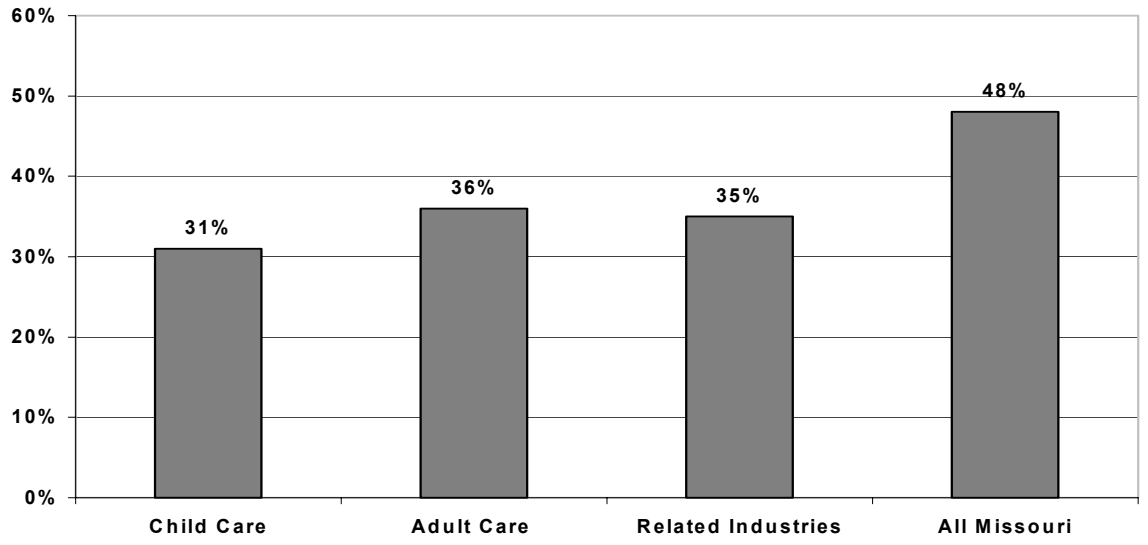
Figures 4.1 and 4.2, which follow, compare 3-month and 2-year tenures among care industry workers. Figure 4.1 illustrates that 26% of adult care workers have been in their position for less than three months while the rate for all Missourians is 21%. Figure 4.2 shows that 36% of adult care workers have been in their position for more than two years compared to a rate of 48% for all Missourians.

FIGURE 4.1
Length of Tenure in the Care Industry for Missouri Employees



Source: University of Missouri, Department of Economics, Interim Report: An Analysis of Workforce Turnover & Related Issues for the Caregiver Industries. Mueser, P., Troske, K., June 9, 2000.

FIGURE 4.2
Length of Tenure in the Care Industry for Missouri Employees



Source: University of Missouri, Department of Economics, Interim Report: An Analysis of Workforce Turnover & Related Issues for the Caregiver Industries. Mueser, P., Troske, K., June 9, 2000.

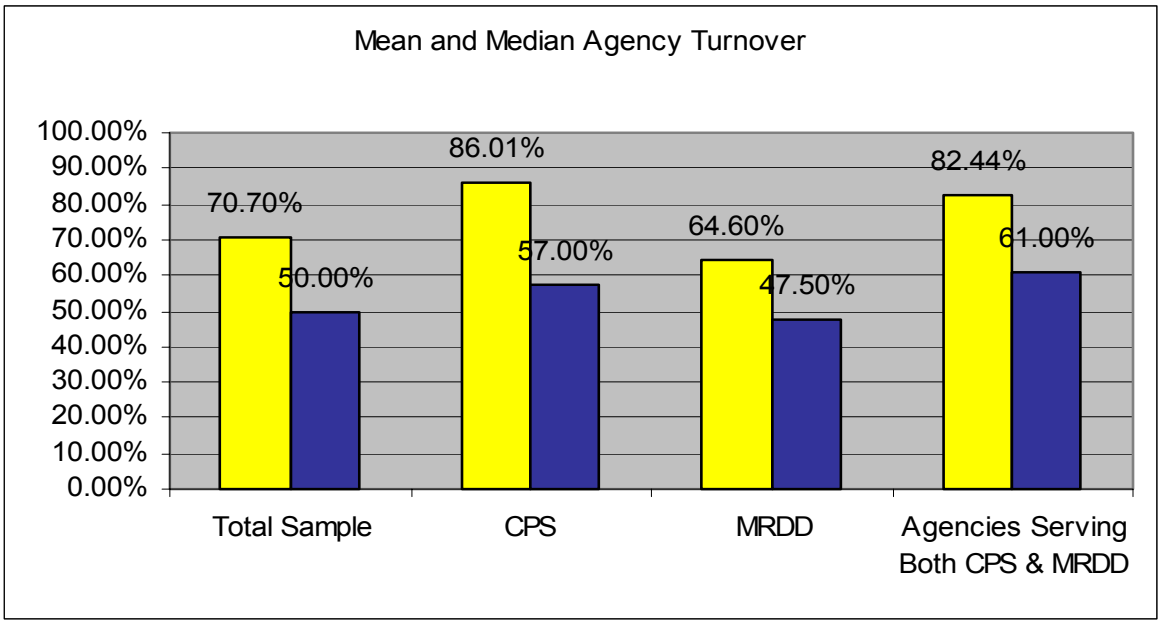
III How Missouri Compares to Others

Missouri's experience is not unlike that of many other states and other industries that struggle to maintain an adequate workforce. Some geographic areas may face greater challenges than others due to unique circumstances such as:

- A large employer that is stable despite periods of economic downturns;
- Areas that are experiencing population loss; or
- A population aging into retirement.

A survey of 375 Department of Mental Health residential providers conducted in January 2002, reflected an overall average turnover rate in excess of 70 percent, with a median of 50%. (See Figure 4.3.)

Figure 4.3
Agency Turnover Rate per DMH Survey, January 2002



Source: "Study of Staff Turnover at Community Residential Contractors of the Division of Comprehensive Psychiatric Services and the Division of Mental Retartdation/Developmental Disabilities, Missouri Department of Mental Health", January 17, 2002. Rinck, C., Harbison, G., McMullen, W.

This same survey, conducted to support a study of staff turnover among DMH community residential service providers, provided additional data on direct care salaries and benefits.

- Division of Comprehensive Psychiatric Service providers
  - Average starting salary - $6.74

    - Average post probationary salary - $7.40
- Division of Mental Retardation and Developmental Disabilities providers
    - Average starting salary - $7.29
    - Average post probationary salary - $8.01
- 20% of all responding providers reported starting salaries below $6.00 per hour, with 10% reporting average post probationary salaries below $6.00 per hour.

TABLE 4.1
National Wage & Benefit Comparison for Providers of MRDD Services

State	Starting Hourly Wage
HIGHER-END WAGES	
Connecticut	$13.83
California	$13.00
Michigan	$12.50
BORDERING STATES	
Iowa	$10.96
Kansas	$9.24
Illinois	$8.15
Nebraska	$8.10
Tennessee	$7.17
Arkansas	$6.68
Kentucky	$6.28
MISSOURI	$7.52 *(DMH 2002 Study, $7.29)*

Source: College of Education & Human Development, University of Minnesota, May 1999.

The following correlations were presented in this study of Department community residential contractor staff turnover issues:

- The higher the starting salary, the lower the turnover rate
- The higher the average salary, the lower the turnover rate
- The presence of sick leave is related to lower turnover rate
- The larger the agency the higher the turnover rate.

IV Factors Influencing the Measure

Reduction in staff turnover is a complex strategic challenge. Many factors influence staff retention in community residential facilities including but not limited to:

Economic Performance and Trends

The unemployment rate is affected by general economic performance. The rate not only affects the volume of potential candidates but increases the costs for recruiting individuals. Competition with other sectors of the economy is a challenge when these sectors may be able to offer better wages and competitive benefit packages as well as career advancement.

Greater Risk for Employees

Individuals considering employment in community residential facilities may choose other alternatives that:

- Have less risk in terms of responsibility for behavioral or health interventions;
- Require less training and commitment; or
- Are less likely to entail overtime or "holdovers".

Particularly in settings where there is little on-site supervision available, potential employees may be uncomfortable with the level of responsibility. Competency requirements by CPS and MRDD can be a daunting responsibility for agencies and human support workers, particularly when individual practice and response may be reviewed as part of Department investigations of abuse or neglect.

Rates

During a time when cost of service delivery has increased steadily, DMH rates paid for community residential services have remained flat with little increase over the last decade. While the private market has seen significant rate increases and the personal care add-on to Residential Care Facilities has resulted in economic benefit for non-DMH consumers, DMH rates have lagged far behind due to level funding.

Independent Housing Alternatives to Residential Care Facilities (RCF)

Consumer input regarding development of housing alternatives stresses the need for more individualized community options for more individuals. Although DMH has invested considerable resources in community based housing, staff shortages have presented a significant obstacle to the expansion of new residential opportunities. Experience has demonstrated that this commitment has resulted in an improved quality of life for consumers. However, the demand for community based residential services has greatly exceeded available resources.

The Americans with Disabilities Act and the Olmstead Decision

The implications of the Olmstead decision are potentially far-reaching in relationship to community residential alternatives. Pressures from state-operated inpatient units to move individuals into the community are already a challenge and are likely to grow as Olmstead compliance plans are implemented. The interpretation that some

community settings may also be considered "institutions", thereby accruing Olmstead applicability to their residents is an issue that may affect patterns of use of these settings. Such an interpretation also affects the degree of sophistication and training necessary for staff in these settings. In addition, efforts by Olmstead stakeholders to increase pay rates for direct care staff will affect recruitment and retention of direct support workers.

Recruitment

Currently the unification of recruitment efforts between the public and private sectors of the service and support industry exist in a few isolated pockets. If we are to be successful in recruitment in the future competitive market, we will need to unify our recruitment efforts with all sectors of the service and support community. This will include the support industry outside of mental health.

Utilizing Generation Change Within the Workforce

The dynamics of the generation "X" has made it clear that mobility is a strong factor in job success in the future years. How we embrace, use, and train to this mobile society will be a strong component to our future workforce. The development of master worker programs, as outlined by the National Skills Standards is one vehicle that can make this possible. Keeping people in our field, no matter where they live has to be a primary goal for longevity.

Training Coordination

In order to meet the training needs of human support workers, better utilize training dollars and provide more consistent competency based training, DMH needs to coordinate training between state and community providers. Recent studies have shown that overlap and inconsistency exist throughout the service support system. We could make changes in this situation through improved coordination of our training efforts.

Pacing of Future Development

A process common among private sector industries is development pacing. It is important that we evaluate the employment demographics before we develop living sites in the future. In the future it will be important that we evaluate the employee demographics before we move into placement options. This will be a sensitive match when our primary objective is to match people with the geographical locations of their choice. However, even the best match will not be successful if we cannot find an employee base.

V What Works

It is clear from the literature that improvements in levels of earnings will reduce turnover. Increased pay alone will have limited effectiveness unless other changes also occur such as perceived status, greater levels of skills and job training, and improving work conditions and environment.

If DMH is to influence turnover rates, it will be critical to address increases in direct care wages and to pair that with efforts to improve benefits, increase training, and provide career advancement opportunities. The most effective strategies must consider DMH's multiple roles in relationship to direct support workers and the appropriate strategic tools must be applied for each role. Unless the larger system context is considered, the benefit of the strategy may accrue to only one segment of the system and may only result in increased competition within Department-funded operations.

VI Concerns

There are several issues that could complicate implementation. These include, but are not limited to:

- Establishing baseline measures that reflect only the part of the industry with which DMH contracts;
- Recognition of the greater impact of general economic conditions and performance;
- Consideration of the inter-relationship of public and private sectors of the public mental health system;
- Difficulty in assuring that base rate increases will directly result in increases in wages when other competing costs of providing the service are increasing as well (i.e., food, transportation, rent , utilities); and
- Limited control that DMH has in relationship to employer decisions regarding personnel management.

VII Description of Measure

In late 2001 the Department designed and implemented a survey of community residential providers with a series of questions about turnover of direct care employees. Community residential providers for the Division of Mental Retardation and Developmental Disabilities and the Division of Comprehensive Psychiatric Services were included in the survey. A total of 913 providers were contacted with 375 participating. This first baseline survey enjoyed a 44.1% return rate. The results include an average turnover as well as a range and specific rates for each Division. Information regarding benefits, starting salaries, and post probationary salaries is also collected. The Department plans to conduct this survey annually as funding is available to support the survey process.

The annual direct care turnover percentage rate for the total sample was 70.70%. This will serve as our baseline measurement

VIII Key Strategies

A. Prepare a FY 2004 budget decision item requesting an increase in base rates that will result in improved earnings for direct care staff and benefits for direct care staff.

B. Continuation of the "Work Place Improvement Team" in collaboration with the Missouri Results Initiative. This team has been chartered to:
    1. Develop policies to provide support to direct care staff and administration
    2. Develop innovative initiatives to assist our work force to be implemented state wide.
    3. Have direct care and administrative staff experience being listened to and valued
    4. Increase staff retention

    [Although this initiative is focused on strategies for implementation in state-run facilities; findings, recommendations, and outcomes will be widely distributed among our provider agencies for incorporation and duplication in their respective operations where applicable.]

C. Coordinate training for direct support staff in order to maximize staff development opportunities and better utilize funds available to private and public providers.

D. Promote career development opportunities across the system, not just within agencies.

E. Explore development of performance-based rates that reflect quality of products and outcomes for consumers.

F. Explore differential salary rates that would reward persons for working persistently difficult-to-staff shifts.

G. Develop new models that increase recognition and support of workers by management and the public.

H. Increase the levels of skills and job training for direct care workers.

I. Improve work conditions and environment.

J. Define accepted standards of practice for staffing levels and patterns that afford quality care and accommodate margins for absenteeism, staff vacancies, vacation, and training.

K. Promote sound supervision and training support for entry level positions through regulation.

L. Develop strategies for technical assistance and support for agencies to develop competencies in strengths-based, habilitative and rehabilitative programming.

M. Through coordinated training efforts provide training that can be accessed by community providers at low-cost that promotes effective service delivery.

N. Explore efforts to recognize and support the work of family, friends and other unpaid, informal caregivers.

KEY OBJECTIVE 4B: Increase Employment Among Missourians with Disabilities Served by the Department of Mental Health

I Why This Measure is Important

Persons with one or more disabilities currently comprise approximately 14.5 percent of the population in the United States. Because of related functional limitations and the social stigma placed on those with disabilities, this population has continuously struggled with barriers to employment and access to community services. Employment is central to healthy adult functioning; in addition to providing the funds needed to live, it supplies status, security, structure and social support. Consumers of the Department of Mental Health (DMH) want to work and, in most cases, are capable of working. Employment boosts self-esteem, provides a sense of purpose and accomplishment, and promotes independence. Employment is considered the primary vehicle for reintegrating consumers into the community as productive and contributing members of society. Improvement in employment correlates positively with improvement in psychological status, family and social relationships, and reduction of symptoms. Psychiatric and substance abuse treatment that incorporates employment-related components has been found to positively impact treatment and post-treatment functioning as evidenced by the number of days employed, monthly income, absenteeism, and work adjustment. Stable employment has also been found to promote recovery by reducing the occurrence and severity of relapse.

Recent reform initiatives in the public welfare system and other entitlement programs stress the importance of work and self-sufficiency. Because substance use/abuse, mental illness, and developmental disabilities can create barriers to employment, it is imperative that the Department of Mental Health initiates provisions to incorporate vocational services into its comprehensive service delivery system.

II Trend Analysis

It is difficult to track DMH consumers who have obtained and retained employment. During the coming year, DMH staff will work to identify an employment baseline incorporating data from the Department's information system (CIMOR) and from the Divisions of Employment Security and Vocational Rehabilitation Services. This data will be used to determine where collaborative employment, education, and training initiatives could encourage successful consumer outcomes.

A number of changes that influence today's workforce must be taken into account when delivering vocational services to DMH consumers. Particularly noteworthy are the shift from a manufacturing to a service economy and advances in

communications and other technologies that make computer literacy a valued and necessary skill. Job growth has occurred in two areas at the opposite ends of the occupational spectrum: high-wage, high-skill technical and professional occupations, and low-wage, low-skill service jobs that may lack opportunities for advancement. Real wages buying power has fallen substantially for workers with the fewest skills, education, and experience. (CSAT TIP #38, Integrating Substance Abuse Treatment and Vocational Services, 2000).

III How Missouri Compares to Others

Based on inquiries to the state's Vocational Rehabilitation Services staff as well as national organizations, there appears to be little data available that relates directly to this objective. An effort will be made during the coming year to identify relevant research findings that will assist the Department in improving employment outcomes for its consumers.

IV Factors Influencing the Measure

DMH consumers seeking employment, unless counseled otherwise, may have widely discrepant expectations about what is desired and what is possible in terms of employment. These discrepancies can lead to treatment and job failure, especially if the consumer underestimates or overestimates his abilities, is not realistic about costs of employment and the challenges of financial independence, and is not prepared for ongoing work and additional training beyond the immediate satisfaction of having a job.

In today's work world, few employees can expect to remain with one company for a complete career. Low-wage workers are particularly vulnerable in this new world of work as other publicly funded safety nets weaken. Going back and forth between work and welfare and other subsidies is no longer a long-term option for the chronically underemployed. Lack of financial security can produce anxiety, depression, and result in relapse unless consumers are trained to be flexible and assertive in regard to work. Work must be seen from the perspective of developing and advancing personal goals. Vocational counseling and guidance can play a vital role in defining one's career path and making difficult work-related decisions.

V What Works

There is not an abundance of literature on "what works" in terms of increasing employment for people with disabilities, in particular those served by DMH. Collaboration among agencies is the key to preventing fragmentation and achieving successful consumer outcomes. Sometimes just a simple change of perspective can make the difference between circumstances being viewed as "needs" and being viewed as assets. For example, a single parent who cannot find a babysitter on a particular evening misses a treatment session. One treatment provider then labels this consumer "non-compliant", but another provider who focuses on childcare and parenting skills recognizes the consumer's adherence to his/her parental

responsibility as a positive asset. With effective collaboration, service providers will learn to recognize these differing viewpoints through their contact with professionals with expertise in different areas.

Work place accommodations (flexible work schedules, job sharing), earnings exemptions, continuing medical benefits, follow up supports, and technical aids are areas that also assist consumers in maintaining employment.

VI Concerns

Consumers are concerned that obtaining and retaining employment will result in loss of federal and state benefits. In order to alleviate some of these concerns being experienced nationwide, the Social Security Administration is making some significant changes to their system to build incentives for individuals with disabilities to work. Since these changes and incentives are not easily understood, benefit specialists are available to consult with consumers statewide and are located at eight independent living centers around the state. They will also travel to the consumer.

Passage of Missouri SB 236 in 2001 established a Medicaid "buy-in" option for persons with disabilities who work but need access to Medicaid benefits to do so. It is anticipated that this program may become operational in FY 2003 and may alleviate some consumer concerns. The Department of Social Services is currently in the process of implementing the provisions of the "buy-in". They are exploring options for people that have a disability and need Medicaid to keep working and keep their coverage by paying a premium based on their income, which will be tied to the federal poverty level.

VII Description of Measure

DMH will use the Division of Employment Security as the data source and will match this data with records of DMH service provision in order to produce the following measures. Measures will be produced and monitored on an annual basis.

- Employment: Percentage of adults served by DMH who work in competitive employment during or after DMH service provision in each fiscal year.
  Numerator: Number of adult DMH consumers who work in competitive employment during or after DMH service provision per fiscal year.
  Denominator: Number of adults served by DMH per fiscal year.

- Employment Wages: Percentage of adults served by DMH who work in competitive employment during or after DMH service provision and who are making wages above the federal poverty level for a family of four in each fiscal year.
  Numerator: Number of adult DMH consumers who are making wages above the federal poverty level for a family of four per fiscal year.
  Denominator: Number of adults served by DMH who work in competitive employment during or after DMH service provision per fiscal year.

These measures are impacted annually by many factors not in control of the Department or state operations, including prevailing economic conditions and employment trends.

In the absence of an established baseline measurement of competitive employment, the Department has not yet established a numerical improvement target.

VIII Key Strategies

DMH policies for employment services should promote an integrated community employment approach that integrates clinical and vocational services. State-level partnerships should exist between DMH and those agencies providing employment programs (Division of Vocational Rehabilitation, Workforce Development Boards, etc.,) as well as regional and local level partnerships between community providers of treatment services, support services, and employment services. Collaboration is crucial for preventing consumers from "falling through the cracks" among independent and autonomous agencies. Programs must look at their consumers with the assumption that it is not feasible or effective to provide everything the consumers need "under one roof." Specific strategies include:

A. Designated staff members from the Divisions of ADA, CPS, and MRDD serve as the "DMH employment team" and take the lead on interdepartmental activities.

B. Team members will finalize the DMH Employment Plan with the Department's Executive Team and monitor progress of the plan during the coming year.

C. A baseline measurement of competive employment among our consumers will be established.

D. Conduct ongoing joint training and educational opportunities with Vocational Rehabilitation, Regional Workforce Development Boards, Missouri Career Centers, etc., about DMH consumer capabilities for employment in order to effectively match consumers with community resources; to facilitate linkages between these entities for the purpose of encouraging regional needs assessment, planning, and problem-solving; and stay informed about Medicaid Buy-In, Ticket to Work, and spend down initiatives.

E. Provide opportunities for consumers and service providers to receive benefits counseling from staff of the Independent Living Centers located around the state.

F.

G. Collaborate with Oxford House and other DMH housing initiatives in order to assist consumers in obtaining and retaining competitive employment.

H. Encourage service providers and service coordinators to focus on employment goals and outcomes through their treatment planning and the person-centered planning process.

KEY Objective 4c: Increase the Percentage of Missourians with Serious Mental Illness Who Show Movement Towards Recovery by 5% by 2006

I Why This Measure is Important

Historically, treatment for populations coping with mental illness was a medical model that focused on pathology and chronicity. During the 1990's there was a shift from the traditional medical model to a focus on capacity and capability rather than a life-long vision of decline and dependency. This transition to person-centered treatment is known as the "recovery model".

In addition, during the 1990's there has been increased national and international emphasis on psychiatric disability. The traditional priority of health care systems has been those chronic diseases and conditions that contribute to mortality (i.e., cardiovascular diseases, cancers, injuries). However, there has been a recent interest in looking at the total burden chronic diseases impose, including lost productivity and years lived with a disability. The 1999 World Health Report (World Health Organization) emphasized the burden of psychiatric disabilities. It is clear that rehabilitation technology can have a positive impact on outcomes for people with psychiatric disabilities, assisting them as they work to become productive and fully contributing members of our society.

Since recovery is such a recent concept in the treatment of persons with severe and persistent mental illness, it is a philosophical construct that has yet to be defined in commonly agreed-upon and measurable terms. A DMH Best Practice Writing Team comprised of consumers, advocates and providers have been working for over a year to operationalize the recovery concept. In a draft document, the Writing Team has developed the following vision statement: DMH consumers have a right to maximize opportunities for independence and self-growth. Services based on choice, participation and purpose better engage DMH consumers and facilitate recovery efforts. *Choice* provides the opportunity for individuals to make realistic and informed decisions. *Participation* occurs when consumers feel hopeful that treatment can work and they can succeed. *Purpose* is achieved when persons are able to develop competencies to meet everyday challenges and set goals for themselves.

II Trend Analysis

Because recovery as a concept has not been measurably defined in a commonly accepted manner, the Department has moved forward with the best available measure for showing movement toward recovery (consumer outcomes are often used as a proxy when discussing effectiveness of service). DMH providers submit

status reports on individuals served with serious and persistent mental illness at time of admission, annually and a time of discharge. These status reports track the following outcomes: type of housing, educational activity, vocational activity, legal involvement, psychiatric hospitalization, substance abuse hospitalization, drug use, and alcohol use. Movement toward recovery is summarized as the Consolidated Composite Indicator.

DMH has measured movement toward independence and recovery for the past three years for people with serious mental illness. This measure has been reported as part of Missouri's Show Me Results. The consolidated composite indicator was in development during the first two reporting years. Therefore, the first two measures (1999 and 2000) are preliminary in nature and should not be considered entirely comparable to the measurement for 2001.

In 1999 DMH reported that 73% of people with serious mental illness were moving toward independence and recovery. In 2000 70% of people with serious mental illness were moving toward independence and recovery. And in 2001 74% of people with serious mental illness were moving toward independence and recovery.

III How Missouri Compares to Others

Since recovery is such a recent concept in the treatment of persons with severe and persistent mental illness, it is a philosophical construct that has yet to be defined in measurable terms. Additionally, there is limited qualitative research to provide empirical data related directly to this objective. In view of this, Missouri will continue to refine the application of the Consolidated Composite Indicator and utilize this measurement as the best available measurement for recovery.

IV Factors Influencing the Measure

The quality of the database is dependent on the completion and timely submission of outcome instruments by providers and the consistency of provider observance of reporting protocols. By closely monitoring data quality and setting up a system to ensure data integrity DMH has increased the reliability of reported data. The DMH Outcomes Web will be used to collect and report this data through the use of technology. This mechanism will greatly improve data integrity.

DMH rules require providers to use outcomes data for the improvement of services. DMH will continue its work to inform its consumers and providers on the use of data to improve the quality of services and supports.

There is discussion within DMH to modify the collection of outcome data for people with serious mental illness, moving from routine submission of data on all consumers participating in recovery-oriented services to a sampling methodology. This method may limit the Department's ability to measure and report the recovery of this population.

V What Works

Limited evidence suggests traditional services, philosophies and models may actually promote a self-perception of helplessness among mental health consumers. The Community Support Services concept, first envisioned by the National Institute of Mental Health in the mid-1970's identified the essential components to adequately support individuals with psychiatric disabilities in the community. Rehabilitation models of mental health service delivery that includes recovery as a core concept evolved from this concept. DMH's Community Psychiatric Rehabilitation Program (CPRP) is based on this model and promotes community-based services, crisis response, peer support, case management, supported employment and normalized housing. The rehabilitation model results in reduced symptomatology, better consumer outcomes, increased satisfaction with services and more efficient service utilization.

VI Concerns

Having a serious and persistent metal illness means losing one's ability to work and with it the ability to support one's self and obtain healthcare. Due to the stigma against mental illness, disabled persons have greater difficulty obtaining disability entitlements than persons with physical or developmental disabilities. This disability entitlement provides consumers with the economic basis with which to begin their path to recovery by providing basic necessities of housing, food, clothing and healthcare. When persons with disabilities recover to the point they are interested in working, they become concerned that obtaining and retaining employment will result in loss of federal and state benefits.

VII Description of Measure

In 1999, DMH developed and applied a method for combining multiple program measures reported on the previously mentioned status report into a single composite measure. The measures include: (1) type of housing, (2) occupational activity, (3) legal involvement, (4) psychiatric hospitalization, (5) substance abuse hospitalization, (6) drug use, and (7) alcohol use.

Each measure represents a goal that might be pursued by DMH consumers. Each consumer was rated on the measures about a year apart. Individuals were scored for whether their ratings indicated whether he/she moved toward, away from or showed no change in his or her relationship to each of the goals. The scores of these measures were combined into a Consolidated Composite Indicator that summarized whether the consumer had moved away from or made no change relative to the goals. The Consolidated Composite Indicator is used by DMH as the best available measurement for recovery.

VIII Key Strategies

A. The Department will continue its promotion of consumer choice and active involvement in planning supports and services through policy development, certification/licensure standards adoption, provider education, and contract requirements.

B. The Department will complete its work on a "Best Practices Guidelines" related to aiding consumers in maximizing opportunities for choice, participation and self-determination. This document will be distributed widely among consumers, advocates and providers of service.

    a. The Department will continue to seek funding opportunities that permit expansion of services and the number of persons served in Community Psychiatric Rehabilitation Programs.

C. The Department will continue to support and grow a variety of housing supports for consumers capable of moving into more independent living arrangements.

D. The Department will continue to support and develop a variety of employment supports for consumers seeking meaningful and competitive work activities. [See Objective 4B: Increase employment among persons with disabilities served by the Department of Mental Health.]

E. The Department will continue to promote opportunities for peer support; such as the use of community support assistance position; the establishment and operation of consumer run drop-in centers.

F. The Department will continue to increase the training and availability of treatment staff to identify and effectively treat alcohol and substance abuse among the mentally ill.

        i. The Department will implement the DMH Outcomes Web for data collection and reporting to ensure data integrity and the use of data for quality improvement throughout the DMH system of services and supports for people with serious mental illness.

G. The Department will analyze "recovery related" data and disseminate it to consumers and providers. The Department will provide technical assistance on how to use the data to improve services and supports as required by DMH Core Certification rules.

DMH KEY SYSTEMS IMPROVEMENT PLANS FY 2003

I DMH WORKPLACE IMPROVEMENTS

Introduction

The Department of Mental Health has committed a team of 12 employees to improving the workplace for front-line staff. The team is composed of people from diverse areas of the organization, from direct care staff to facility CEOs. The Director realizes that our main contact with clients is through our direct care staff, and if they are placed in a system of work which is broken in places, they will in turn not be able to provide the best possible care to our clients.

Direct care staff personnel have not received raises for two years, while their health care costs are rising. They are often required to work many overtime hours, knowing that it could be some time before they are paid for their services. Feeling valued and like they have input into daily decisions involving the workplace and patient care is not a daily occurrence for direct care staff. Knowing that direct care staff will most likely not receive raises and more staff to share the workload, the Director has charged the Workplace Improvements Team to identify what else can be done in lieu of financial rewards to demonstrate our value of the work these individuals perform.

The team is a work in progress that began in late April. Approximately 250 direct care staff members have participated in focus groups conducted by the team. Currently the team is analyzing the data and preparing to form recommendations which will be presented late July/early August.

Measures

The Workplace Improvements team realizes the value of measurements. These measurements will be identified with the forthcoming recommendations. They will be aligned with customer desired outcomes, and they will be reviewed on a regular basis. At this point, however, any identification of measurements is premature.

Strategies

The Workplace Improvements team will make recommendations to the Department Director late July or early August. At that time the Director will have two weeks to consider the recommendations and consult with his management team. The team will then get back together with the Director, at which time he will identify the recommendations with which he wishes to move forward. The action plan will be developed at that time. It will identify the Recommendation, the Deliverable, Who's Responsible, Due Date, and Resources needed to complete the recommendation. Regular reviews of the action plan with the team and Director will ensure that the implementation phase stays on track.

The Workplace Improvements team is going through a structured process. The highlights of that process are:

- Achieve consensus on the product / service
- Determine customer roles and segmented into relevant groups
- Talk to the customers (Focus Groups)
- Analyze the data
- Measure how we're currently doing on the Customer Expectations
- Generate solutions to meet customer expectations
- Evaluate solutions

II DMH FACILITY COLLECTIONS

Introduction

The Department Director chartered a team to increase cash collections from insurance billing for state-operated CPS facilities. There is currently a problem with the billing-to-collections ratio for services provided by the Department of Mental Health. For every $100 billed to insurance companies, DMH is collecting approximately $30. The ability to collect a greater percentage of billings would mean more money going back into general revenue, and possibly back into the Department. Collections is a key system because it is an opportunity to recover costs incurred while treating clients.

Like Workplace Improvements, this team is also a work in progress. Beginning in late April, the seven-member team, comprised CFOs, CEOs and reimbursement staff, has conducted research to see where the problems are occurring, where they are not occurring, how private-sector facilities deal with the same issue, and what they can do to increase collections at DMH. Recommendations are expected sometime in July.

Measures

The Collections team realizes the value of measurements. These measurements will be identified with the forthcoming recommendations. They will be aligned with project goals, and they will be reviewed on a regular basis. At this point, however, any identification of measurements is premature.

Strategies

The Collections team will make recommendations to the Department Director sometime in July. At that time the Director will have two weeks to consider the recommendations and consult with his management team. The team will then get back together with the Director, at which time he will identify the recommendations with which he wishes to move forward. The action plan will be developed at that time. It will identify the Recommendation, Deliverable, Who's Responsible, Due Date, and Resources needed to complete the recommendation. Regular reviews of the action plan with the team and Director ensure that the implementation phase stays on track.

The Collections team is going through a structured process. The highlights of that process are:

- Define problem
- Determine what data is needed to better understand the problem
- Analyze the data
- Problem statement
- Generate possible solutions
- Evaluate solutions

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APPENDIX A: Other Sources of Information on Key Outcomes

OUTCOME 1

Harvard School of Public Health College Alcohol Study
www.hsph.harvard.edu/cas/alcohol

Higher Education Center for Alcohol & Other Drug Prevention, US Department of Education
www.edc.org/hec/socialnorms

National Center on Addictions & Substance Abuse at Columbia University
www.casacolumbia.org

- The National Survey of American Attitudes on Substance Abuse VI: Teens

National Highway Traffic Safety Administration, US Department of Transportation
www.nhtsa.dot.gov

- Impaired Driving (Alcohol & Drugs)
  www.nhtsa.dot.gov/people/injury
- National Survey of Drinking and Drivers' Attitudes and Behavior 1996
- Traffic Safety Facts 1999
- Underage Drinking
  www.nhtsa.dot.gov/people/injury/alcohol/index.html

Age at First Drink and Risk for Alcoholism: A non Causal Association. Prescott C.A., Kendler, K.S. *Alcoholism Clinical and Experimental Research* 1999; 23(1) 101-107.

Binge Drinking: Should We Attack The Name Or The Problem? Dr. Wechsler's Op-ed on "Binge Drinking" Definition. *The Chronicle of Higher Education* October 20, 2000.

College Binge Drinking in the 1990s: A Continuing Problem - Results of the Harvard School of Public Health 1999 College Alcohol Study. Wechsler H, Lee J, Kuo M, Lee H. *Journal of American College Health* March 2000; 48 (10): 199-210.

College Students Define Binge Drinking and Estimate It's Prevelance: Results of a National Survey. Wechsler H, Kuo M. *Journal of American College Health* September 2000; Vol. 49, No. 2, pp. 57-64.

The Massachusetts Saving Lives Program: Six Cities Shift the Focus from Drunk Driving to Speeding, Reckless Driving and Failure to Wear Safety Belts. Hingson R., Howland J., Schiavone T., Damiata M. *Journal of Traffic Medicine* 1990: 123-132.

The Monitoring the Future National Survey Results on Adolescent Drug Use: Overview of Key Findings, 2000. Johnston, L.D., O'Malley, P.M., & Bachman, J.G. (2001). (NIH Publication No. 01-4923). Bethesda, MD: National Institute on Drug Abuse, c. 56 pp.

Resiliency: Relevance to Health Promotion Detailed Analysis. Submitted to: Office of Alcohol, Drugs and Dependency Issues by Colin Mangham, Ph.D., Patrick McGrath, Ph.D., Graham Reid, Ph.D., Miriam Stewart, Ph. D. Atlantic Health Promotion Research Center, Dalhousie University
www.hc-sc.gc.ca/hppb/alcohol-otherdrugs/pube/resilncy/analysis.htm#table2

Status Report on Missouri's Alcohol and Drug Abuse Problems**,** Seventh Edition-January 2002.

Substance Use, Delinquent Behavior, and Risk and Protective Factors Among Students in the State of Missouri: 2000. Prepared for Missouri Department of Mental Health, Division of Alcohol and Drug Abuse, February 2001.

Underage College Drinkers Have Easy Access To Alcohol, Pay Less, and Consume More per Occasion than Older Students. Wechsler H, Kuo M, Lee H, Dowdall G. *Journal of Preventive Medicine* July 2000; Vol. 19, No. 1, pp. 24-29.

University of Missouri Wellness Resource Center
Kim Dude, Director
34 Brady Commons
Columbia MO. 65211
573-882-4634
http://web.missouri.edu/~wrcwww/
dudek@missouri.edu

The Department of Health and Senior Services Strategic Plan
http://www.dhss.state.mo.us/StrategicPlanning/Intro_StrategicPlan.html

Prevalence and Implications of Perinatal Substance Use in Missouri, Dempsey, et. al., Volume 93, No. 6, June 1996, *Missouri Medicine*

Grant, B. F., The impact of a family history of alcoholism on the relationship between age at onset of alcohol use and DSM-IV alcohol dependence: Results from the National Longitudinal Alcohol Epidemiologic Survey, Alcohol Health and Research World, Volume 22, 1998.

Swartzwelder, H.S., Wilson, W.A., and Tayyeb, M.I., Age-dependent inhibition of long-term potentiation by ethanol in immature versus mature hippocampus, Alcoholism: Clinical Experimental Research, Volume 20, 1996.

National Institute on Drug Abuse, National Survey Results on Drug Use from The Monitoring the Future Study, 1975-1997, Volume I: Secondary School Students, Rockville, MD: Department of Health and Human Services, 1998.

OUTCOME 2

Children's Safety Network, National Injury and Violence Prevention Resource Center
"Youth Suicide Prevention Plans."
www.edc.org/HHD/csn

Missouri Suicide Prevention Plan - A Collaborative Effort (in draft)

Office of the Surgeon General, US Department of Health & Human Services
www.surgeongeneral.gov

- Mental Health: A Report of the Surgeon General
  www.surgeongeneral.gov/library/mentalhealth
- The Surgeon General's Call to Action to Prevent Suicide July 1999
  www.surgeongeneral.gov/library/calltoaction

OUTCOME 3

Annie E. Casey Foundation
www.aecf.org

- Kids Count Missouri Data 2000
  www.oseda.missouri.edu/kidscount
- Kids Count National Data 2000
  www.aecf.org/kidscount

Missouri Department of Elementary & Secondary Education
www.dese.state.mo.us

Missouri Department of Mental Health
www.modmh.state.mo.us

- 503 Project Performance and Evaluation Report - March 1994
- Division of Comprehensive Psychiatric Services Comprehensive Mental Health Plan for Children and Families, 1999

Missouri Department of Social Services, Division of Family Services
www.dss.state.mo.us

Missouri Juvenile Courts
www.osca.state.mo.us

Office of the Surgeon General, US Department of Health & Human Services
www.surgeongeneral.gov

- Mental Health: A Report of the Surgeon General
  www.surgeongeneral.gov/library/mentalhealth
- Report of the Surgeon General's Conference on Children's Mental Health: A National Action Agenda
  www.surgeongeneral.gov/cmh/childreport

Components of a System of Care, What Does The Research Say? Rivera, V.R. & Kutash, K. (1994). Tampa, FL: University of South Florida, Florida Mental Health Institute, Research and Training Center for Children's Mental Health.

The 11th Annual Research Conference Proceedings, A System of Care for Children's Mental Health: Expanding the Research Base (March 8 to March 11, 1998). Willis, J., Liberton, C., Kutash, K. & Friedman, R.M. (Eds.), (1999). Tampa, FL: University of South Florida, The Louis de la Parte Florida Mental Health Institute, Research and Training Center for Children's Mental Health.

OUTCOME 4

Agency for Health Care Research & Quality, US Department of Health & Human Services
www.ahrq.gov

Bazelon Center for Mental Health Law
www.bazelon.org

Institute for Safe Medication Practices
www.ismp.org

Joint Commission on Accreditation of Healthcare Organizations
www.jcaho.org

- ORYX/Performance Measurement
  www.jcaho.org/oryx_frm.html

MEDERRORLAW.COM
www.mederrorlaw.com

Medscape Today
www.medscape.com

Missouri Works!

www.works.state.mo.us

National Alliance for the Mentally Ill
www.nami.org

National Association of State Mental Health Program Directors
www.nasmhpd.org

- National Technical Assistance Center for State Mental Health Planning
  www.nasmhpd.org/ntac
- Research Institute
  www.rdmc.org/nri
  - Performance Measures
    www.rdmc.org/nri/firstpage

National Institute of Mental Health
www.nimh.nih.gov

National Mental Health Association
www.nmha.org

National Safety Council
www.nsc.org/nsm/home.htm

Occupational Safety & Health Administration, US Department of Labor
www.osha.gov

Office of the Surgeon General, US Department of Health & Human Services
www.surgeongeneral.gov

- Mental Health: A Report of the Surgeon General
  www.surgeongeneral.gov/library/mentalhealth

Substance Abuse & Mental Health Services Administration
www.samhsa.gov

US Census Bureau, US Department of Commerce
www.census.gov

World Health Organization
www.who.int/home-page/

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APPENDIX B: Overview of Core Programs & Services

DIVISION OF ALCOHOL AND DRUG ABUSE

ADA provides substance abuse services through a network of contractors that operate prevention programs and treatment centers throughout the state.

Detoxification
Substance abuse treatment often begins with detoxification, in which an individual is assisted in withdrawing from alcohol or other drugs in a safe, supportive environment. Options include social setting detoxification, modified medical detoxification, and medical detoxification.

Residential Rehabilitation
In a residential treatment program, a person receives round-the-clock care, seven days a week. Rehabilitation includes assessment, individual and group counseling, family counseling, participation in self-help groups, and other supportive interventions.

Outpatient Rehabilitation
Outpatient programs and services are designed for persons whose substance abuse is less severe or chronic and who do not require residential settings for treatment. They are also designed for persons who have graduated from residential programs and need follow-up counseling and support.

CSTAR Program
CSTAR (Comprehensive Substance Treatment and Rehabilitation) focuses on serving people in their communities with individual and group counseling, skill building, family therapy, education, case management, and, where necessary, supportive housing.

- Women's Treatment Programs
- Adolescent Treatment Programs
- General Population Programs

CSTAR Alt-Care Program
The CSTAR Alt-Care Program is specially designed for female offenders being released from correctional institutions and those under probationary supervision. A joint effort through the Missouri Department of Corrections and ADA, this program offers outpatient substance abuse counseling and other CSTAR services to women

and their children while facilitating reintegration into the family and community. Alt-Care Programs are located in Kansas City and St. Louis.

Opioid Treatment Program (OTP)
The Opioid (methadone) Treatment Program (OTP) is designed for medically supervised withdrawal from heroin and other opiate drugs, followed by ongoing treatment and rehabilitation for addiction and related life problems. Missouri's OTP meets federal guidelines for such programs.

Compulsive Gambling
ADA provides outpatient treatment services to compulsive gamblers and their families throughout Missouri. Funding comes from casino admission fees. ADA also certifies compulsive gambling counselors.

Substance Abuse Traffic Offenders Program (SATOP)
ADA certifies programs to provide services to adults and minors who have had alcohol- or drug-related traffic offenses. The Substance Abuse Traffic Offenders Program (SATOP) serves more than 32,000 DWI offenders annually who are referred as a result of an administrative suspension or revocation of their drivers' licenses, court order, condition of probation, or plea bargain.

Oxford House
Oxford House is a network of self-run, self-supported recovery houses. Each house is chartered by Oxford House, Inc. To be considered for a charter, each house abides by three basic rules: 1) The house evicts anyone who relapses, 2) the house is financially self-sufficient, and 3) the house is democratically run by the residents. ADA fosters Oxford House development throughout the state.

Prevention
Preventing substance abuse not only prevents the tragic consequences of addiction but also allows for better use of the limited resources available to ADA. Therefore, the DADA strives to reduce the number of persons needing treatment through an extensive prevention effort.

- Regional Support Centers
  Regional Support Centers (RSC) are the primary source of technical assistance support for the Community 2000 teams. The goal of the RSC is to facilitate development of teams capable of making changes in substance use patterns in their community. Each RSC has a mobilizer or prevention specialist who works directly with the teams in his or her area and assists with the development of teams and task forces in communities that desire to develop one. Additionally, through education activities targeted at tobacco retailers, the RSC play a key role in Missouri's efforts to limit the sales of tobacco products to underage youth.

Missouri's Community 2000 Teams
Community 2000 is a network of volunteer, community teams focusing on reducing the incidence of substance use and abuse in their communities and changing community norms toward substance use by youth and others. Organization and development of Community 2000 teams was initiated in 1987. Each team is composed of community volunteers from the area served. Teams receive technical assistance and training from the regional support centers on a variety of topics related to their organization development and implementing prevention strategies. A 1998 evaluation of the Community 2000 program concluded that Community 2000 teams have the potential for making a difference in their communities. There are approximately 190 volunteer groups registered with the Community 2000 program.

- Missouri SPIRIT (School-based Initiative)
  The goal of Missouri SPIRIT is to support the development and implementation of a continuum of substance abuse prevention services in all public schools, grades kindergarten through 12.

- Community-based Prevention
  Through a network of community-based providers, ADA offers evidence-based primary prevention services in schools and communities. Primary prevention is designed to reduce the number of youth who start using alcohol and other drugs; reduce the factors that place individuals, families, and communities at risk for substance abuse; and lower the overall rate of substance use and abuse.

- Statewide Training and Resource Center
  The Statewide Training and Resource Center (STRC) conducts a variety of activities and programs on behalf of the Division and the overall state prevention system. The STRC provides resources, training, and technical assistance for the RSC and community-based service providers. STRC also presents a number of statewide prevention conferences and workshops throughout the year. STRC operates a consultant resource bank with resources available to the prevention community, administers the Community 2000 mini-grant program, and operates the statewide RADAR resource site.

Synar Project (Tobacco Education)
Missouri retail outlets that sell tobacco are offered education and training to increase their awareness of tobacco regulations and help them develop and maintain policies and procedures that support responsible practices regarding youths. This activity includes routine mailing of educational material and notices regarding tobacco issues and visits by Division representatives from the community, Division staff, and youth participants.

Additional Services

- Certification of SATOP, Prevention, and Institution-based Correctional Programs
- Contract Compliance Audits
- Technical Assistance and Training
- Public Education
- Research and Evaluation

DIVISION OF COMPREHENSIVE PSYCHIATRIC SERVICES

Forensic Services

Forensic services provides evaluation, treatment and community monitoring under the order and direction of the circuit courts for mentally ill and developmentally disabled individuals involved with the criminal justice system. Evaluation and treatment in appropriately secure environments. CPS offers four levels of security (Maximum, Intermediate, Minimum, and Open Campus) at its facilities, with the desired goal of progressive movement through the security continuum based on clinical condition and risk assessment:

- Maximum Security – Fulton State Hospital
- Intermediate Security – Fulton State Hospital
- Minimum Security
  - Northwest Missouri Psychiatric Rehabilitation Center
  - St. Louis Psychiatric Rehabilitation Center
  - Southeast Missouri Mental Health Center
- Open Campus
  - Northwest Missouri Psychiatric Rehabilitation Center
  - St. Louis Psychiatric Rehabilitation Center
  - Southeast Missouri Mental Health Center
  - Fulton State Hospital

Individuals who are released by Circuit Courts from state facilities into community settings are followed by Forensic Case Monitors who assure that these individuals are continuing to fulfill the conditions of their release.

Sexually Violent Predator Program

CPS operates the Sexually Violent Predator program on the grounds of Southeast Missouri Mental Health Center in Farmington. Individuals who have been detained while the courts are determining whether they should be committed to involuntary treatment under the Sexually Violent Predator statutes, as well as individuals who have been committed for treatment under these statutes, are housed in a secure setting. Staff from the Department of Corrections provide perimeter security for this program. CPS staff provide treatment services and supports at the facility.

Access/Crisis Intervention System

CPS contracts with community mental health centers to provide crisis response services through the Access/Crisis Intervention System. Contractors are required to provide a 1-800 number 24-hour crisis hotline, and face-to-face crisis response services in community settings for individuals in acute psychiatric crisis. The crisis hotline and mobile crisis response teams have access to a wide array of services and supports, including acute hospitalization, next-day appointments, respite services, etc., in order to manage psychiatric crises.

Community Psychiatric Rehabilitation Program

The Community Psychiatric Rehabilitation (CPR) Program provides intensive community support, medication management, and psychosocial rehabilitation for individuals with severe, disabling mental illness. This program is funded through Medicaid under the Rehabilitation Option, and is the premier program for supporting seriously mental ill individuals living in community settings.

Comprehensive Outpatient Services

- For Adults
  Within the limits of appropriations, CPS contracts for a wide array of community services and supports for adults affected by mental illness, including screening, evaluation, therapy services, medication management, and information and education services. Medicaid funded Targeted Case Management services are also provided. Recently, CPS has developed contracts for a number of consumer-operated services and supports, including drop-in centers, educational programs, and support-lines.

- For Children and Youth
  Within the limits of appropriations, CPS contracts for a wide array of community services and supports for seriously emotionally disturbed children and youth, including screening, evaluation, therapy services, medication management, respite services, in-home crisis support services, and information and education services. Medicaid funded Targeted Case Management services are also provided.

Homeless Outreach Services

CPS contracts for outreach services to individuals who are homeless and mentally ill. These services are designed to engage this difficult to reach population, and encourage access to treatment services and supports.

Supported Community Living Services

- For Adults
  CPS provides a wide range of housing alternatives for adults affected by serious mental illness. CPS supports individuals living in nursing facilities, residential care facilities, psychiatric group homes, semi-independent apartment programs, and independent apartments. In addition to paying residential or housing cost, CPS provides case management services for these individuals, as well as needed supplemental treatment services and supports.

- For Children and Youth
  CPS purchases residential treatment for children and youth with serious emotional disorders, including therapeutic foster care. In addition to paying

residential costs, CPS provides case management services for these individuals, as well as needed supplemental treatment services and supports.

Acute Hospitalization

- For Adults
  CPS provides acute psychiatric hospitalization for adults at the following state operated facilities:

  - Western Missouri Mental Health Center
  - Mid Missouri Mental Health Center
  - Metropolitan St. Louis Psychiatric Center
  - Southeast Missouri Mental Health Center
  - Southwest Missouri Mental Health Center

  In addition, CPS purchases acute psychiatric hospitalization through it contracts with community mental health centers.

- For Children and Youth
  CPS provides acute psychiatric hospitalization for children and youth at the following state operated facilities:

  - Western Missouri Mental Health Center
  - Mid Missouri Mental Health Center
  - Hawthorn Children's Psychiatric Hospital
  - Northwest Missouri Psychiatric Rehabilitation Center

  In addition, the CPS purchases acute psychiatric hospitalization through its contracts with community mental health centers.

Long Term and Residential Psychiatric Care

For Adults

CPS provides long-term hospitalization and residential care for adults at the following state operated facilities.

- Northwest Missouri Psychiatric Rehabilitation Center
- Fulton State Hospital
- St. Louis Psychiatric Rehabilitation Center
- Southeast Missouri Mental Health Center
- Southwest Missouri Mental Health Center

For Children and Youth

CPS provides residential care for children and youth at the following state operated facilities.

- Hawthorn Children's Psychiatric Hospital
- Cottonwood Residential Treatment Center

DIVISION OF MENTAL RETARDATION AND DISABILITIES

Habilitation Centers
MRDD operates habilitation centers primarily to serve individuals who are severely disabled, behaviorally disordered, court committed, or medically fragile. The primary mission of the habilitation centers is to provide residential supports and treatment services to people referred by the regional centers. Below is a list of the state operated facilities:

- Bellefontaine Habilitation Center
- Higginsville Habilitation Center and Northwest Community Services
- Marshall Habilitation Center
- Nevada Habilitation Center
- Southeast MO Residential Services
- St. Louis DDTC

Regional Centers
MRDD operates eleven regional centers throughout the state of Missouri. These regional centers are based on eleven principle sites that are supported by numerous satellite locations and represent the primary points of entry into the MRDD system. Regional centers provide assessment and case management services and referral to numerous contract service providers throughout the state. Regional Centers are primarily responsible for service coordination, the development and implementation of a “person centered plan” and the management of state and federal funds that are used to support persons with developmental disabilities and their families. The following is a list of regional centers:

- Albany Regional Center
- Central Missouri Regional Center (Columbia, MO)
- Hannibal Regional Center
- Joplin Regional Center
- Kansas City Regional Center
- Kirksville Regional Center
- Poplar Bluff Regional Center
- Rolla Regional Center
- Sikeston Regional Center
- Springfield Regional Center
- St. Louis Regional Center – North
- St. Louis Regional Center – South

Community Based Services

- Sarah Jian Lopez Medicaid Waiver
  The Sarah Jian Lopez Waiver is a Medicaid model waiver operated by MRDD. This waiver allows access to funding for appropriate care and support for children with developmental disabilities so they may continue living at home with their families. Ordinarily, Medicaid eligibility for children is dependent on parental income and resources. The Sarah Jian Lopez Waiver allows parental income and resources to be disregarded for those children who have been determined to be permanently and totally disabled. The purpose of this waiver is to maintain children in their homes and with their families as an alternative to institutionalization. MRDD is able to serve up to 200 children under the age of 18 throughout the state of Missouri.

- Missouri's Consumer and Family Directed Supports
  Missouri's Consumer and Family Directed Supports enable families to have choices, make informed decisions, and direct resources to meet their own unique needs. It seeks to help families become more involved in the care and treatment of their family members with disabilities. This initiative targets individuals of all ages from families with young children to families with parents who are aging or in poor health. The program can access both, Medicaid Waiver or general revenue funds (which ever is appropriate). Natural supports, which are supports provided by the people within the community, may be supplemented by services provided by DMH including respite care, personal assistance, adaptive equipment, and home modifications, just to name a few.

Home and Community Based Waiver
The Home and Community Based Waiver is used as the primary source of funding for people who live in the community. MRDD uses general revenue funds to match federal Medicaid dollars to pay for services under the waiver. The waiver includes people who live in group homes, supported living, and with their families. The Medicaid Home and Community Based Waiver for individuals who have mental retardation and/or a developmental disability offer services to certain individuals who are Medicaid eligible and who would otherwise, but for receipt of services through the waiver, require placement in an intermediate care facility for the mentally retarded. Services under the waiver are provided as an alternative to that level of care and the provisions through the waiver must be determined necessary in order to avoid institutionalization.

Family Stipend and Loan Program
The Family Stipend and Loan Program began in 1993 when the General Assembly passed House Bill 330 to assist Missouri's families who have children, under the age of 18, with developmental disabilities living at home. The programs were created to help maintain and enhance families' ability to care for their children at home. The

monthly cash stipend, which can amount to the maximum federal SSI payment for an individual with a disability who lives at home, can be used for goods and services to benefit the child. Low interest loans, with a maximum amount of $10,000 for a sixty-month period, are also available for families who may not be able to get a loan through traditional means. The loans are typically used for major equipment purchases, home modifications, handicapped accessibility, or similar goods and services.

First Steps
First Steps provides early intervention services to families with young children (ages birth to 3 years) with disabilities. A collaborated effort among the Missouri Departments of Mental Health, Social Services, Health, and Elementary and Secondary Education, the program consists of planning, developing and implementing a network of family focused services.

Choices for Families
Choices for Families provides general revenue funds to help meet the needs of family members with disabilities who live at home. The program works in two ways: Families pay for items and services and then submit receipts for reimbursements to their regional centers, or the families obtain vouchers from the regional centers to obtain items for services from providers who then submit the voucher to the regional centers for payment. In this limited voucher-type program, the families choose their own providers and determine the manner in which the services will be provided to meet their unique needs.

Missouri's Autism Program
Working with DMH, families of persons with autism designed a system in which support services are delivered in homes by providers chosen by an advisory committee comprised of families. The program serves approximately 1,600 families statewide.

Quality Framework: Partnership for Customer Focused Systems

The Quality Framework provides a systematic approach to ensuring quality services to persons with developmental disabilities who live in the community. The process for reviewing services will include persons with developmental disabilities, regional centers, and staff in central office. A second phase involves the Missouri Alliance for Individuals with Developmental Disabilities (MOAIDD). This is a statewide volunteer organization of people with developmental disabilities and their families. MOAIDD monitors residential programs every two years throughout Missouri.

OFFICE OF THE DIRECTOR

Mental Health Provider Certification and Licensure
DMH licenses and/or certifies facilities and programs that provide treatment services to consumers with psychiatric, mental retardation/developmental disabilities and substance abuse problems. DMH surveys and verifies compliance with care and treatment standards for approximately 960 providers, (most with multiple sites), per year.

Employee Disqualification Registry
DMH maintains a registry of persons who have had administrative substantiations made against them for abuse or neglect pursuant to department rule. This information can now be accessed by state facilities and mental health service providers to prevent re-employment of such persons in direct care positions. This information will be made available to individual citizens seeking to hire direct care personnel via the Family Care Safety Registry, January 2003.

Consumer Affairs Services
The Director's Office provides a publicized access point for consumer and citizen mental health service complaints. Complaint resolution is assigned and tracked. The Office also provides information and referral service for citizens seeking mental health related information.

Legislative Liaison
The Liaison assists legislators in accessing needed mental health and department related information.

Mental Health Public Awareness Efforts
Public Awareness efforts promote the use of public media to increase the awareness of mental illness, substance abuse and developmental disabilities among Missouri citizens. Focus is on de-stigmatizing these illnesses and disabilities, promoting healthy lifestyles, and accessing needed treatment.

Mental Health Services Information Database and Systems
DMH maintains a comprehensive electronic database and systems to support the complex functions of a state mental health department. DMH is currently committed to a major information system conversion to support its roles as purveyor and biller of services; its purchaser/broker and payor of services; and its service regulator and monitor of services. DMH is also engaging in efforts to assure its (and its service partners) full compliance with the federal Health Insurance Portability Act of 1996 (HIPAA).

Department Operational Supports
Operations include such supports as human resource management, budget preparation/monitoring, contract preparation/management, third party payer billings, internal audit services, outcomes evaluation, regulatory process, abuse/neglect

investigations, administrative hearings/appeals, emergency management response, clinical consultation (medical, nursing, infection control, dietary).

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APPENDIX C: Priority Results for Missourians; Managing for Results

Missouri is a Leader in Education

Result: Increased percentage of children prepared for kindergarten
Increased percentage of students scoring proficient or higher on MAP tests
Increased percentage of 18-year-olds with a high school diploma or GED

Success Predictors

- Parents participating in Parents as Teachers program
- Children not abused or neglected
- Children participating in a quality early childhood experience
- K-3rd graders in classes with 15-20 students
- Use of technology in the classroom
- High quality teachers
- School attendance
- Youth involved in extracurricular and community activities
- Teens not getting pregnant
- Students without substance abuse

Missouri is Successfully Navigating through Tough Economic Times

Result: Increased level of per capita income
Decreased rate of unemployment

Success Predictors

- Missourians with undergraduate or technical degrees
- Improved net farm income
- High wage jobs
- Higher rates of employment among persons with disabilities
- Thriving businesses
- Economic health of the community
- Safe and sound financial institutions
- High quality transportation infrastructure
- Representation for all citizens in the economy

Missouri is a Safe, Healthy Place to Live and Work

Result: Decreased rates of crimes against persons
Decreased rates of crimes against property
Increased percentage of births resulting in healthy birth-weight babies
Decreased impact of chronic diseases
Increased life expectancy

Success Predictors

- Few repeat offenders (recidivism rate)
- Less juvenile crime
- Mothers accessing pre-natal care
- Mothers not smoking or abusing drugs during pregnancy
- Higher immunization rates
- Lower rates of chronic risk factors (smoking, obesity, etc.)
- Missourians with health insurance
- Missourians not living in poverty
- Clean air and water
- People with mental illnesses moving towards recovery